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ВОПРОСЫ ЭКОНОМИКИ

English Translation of the U.S.S.R. Monthly Journal VOPROSY EKONOMIKI

IN THIS ISSUE

A Decisive Landmark on the Road to Communism

The National Income of the USSR and its Utilization in the Seven–Year Plan

The Seven–Year Plan and the Development of the World System of Socialism

The Development of Industry During the Seven–Year Plan

The Statistical Study of Specialization and Subcontracting in Industry

Technical Re-equipment of Railway Transportation and Problems of Economic Efficiency

Some Problems in the Improvement of National Economic Planning

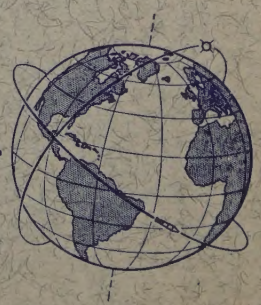
Strengthening the Principle of Material Incentive in Collective Farm Production

The Role of Scientific and Technological Collaboration Among the Lands of Socialism in the Development and Reinforcement of the World Socialist Economic System

Modern Capitalist Theories of the Economic Cycle

Guaranteed Monetary Wages on Kolkhozes

A Compendious Work on the Socialist World Economic System



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Problems of Economics

TABLE OF CONTENTS

Vol. II, No. 2

June, 1959

Page

A DECISIVE LANDMARK ON THE ROAD TO COMMUNISM 3

N. LAGUTIN and V. SKURATOV: The National Income of the USSR and its Utilization in the Seven-Year Plan 11

. DUDINSKY: The Seven-Year Plan and the Development of the World System of Socialism 17

. KHEYNMAN: The Development of Industry During the Seven-Year Plan 23

N. G. GRACHEV: The Statistical Study of Specialization and Subcontracting in Industry 31

A. MIKHEYEV, V. DMITRIYEV and YA. SHUKSTAL: Technical Re-equipment of Railway Transportation and Problems of Economic Efficiency 37

V. KOLTSOV: Some Problems in the Improvement of National Economic Planning 43

M. OSADKO: Strengthening the Principle of Material Incentive in Collective Farm Production 46

V. GORELOV: The Role of Scientific and Technological Collaboration Among the Lands of Socialism in the Development and Reinforcement of the World Socialist Economic System 51

P. OLDAK: Modern Capitalist Theories of the Economic Cycle 58

CONSULTATION

T. ZASLAVSKAYA: Guaranteed Monetary Wages on Kolkhozes 64

CRITICISM AND BIBLIOGRAPHY

D. BOGOMOLOV, G. GERTZOVICH, A. MARTYANOV and I. SEMENOV: A Compendious Work on the Socialist World Economic System 70

. LVOV: A Book on the National Income of the USSR 75

T. SHAMBERG, N. KURILIN, B. KAYE and K. POTOPOV: Economic Literature Released in 1959 77

. Collective Work on Building Communist Society in the USSR 83

NOTES AND CORRESPONDENCE

. LISICHIN: Labor Remuneration on Kolkhozes 84

SCIENTIFIC LIFE

. RUBINCHIK: A Conference on the Improvement of Forms of Labor Remuneration on Kolkhozes 89

New Ukrainian Economics Journal 93

INTERNATIONAL LEARNED TIES AMONG ECONOMISTS

. STUPOV: The Prague Conference of Economists from the Socialist Countries 94

U. K.: A Delegation of Soviet Economists in France 94

. M.: A Meeting of Soviet and Chinese Economists in Harbin 95

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A Decisive Landmark on the Road to Communism

The 21st Congress of the Communist Party of the Soviet Union was an event of outstanding importance in the history of our country and of mankind as a whole. The Congress summarized the results of the world-historic triumphs recorded by the different peoples of the USSR in the period since the 20th Party Congress, outlined a grandiose program for all-out upbuilding of communism in our country, defined the strategic line of the Party in the period immediately ahead, and creatively elaborated a number of new and important problems of Marxist-Leninist theory, making a contribution of invaluable importance to the treasury of the most advanced science of the development of human society.

The report of Comrade N. S. Krushchev and the resolutions of the 21st Congress of the Communist Party of the Soviet Union constitute a creative development of the Leninist plan of upbuilding of communism in our country. The theoretical propositions formulated in these documents represent a new stage in the scientific discovery of the laws of the upbuilding of communism. An all-round analysis and generalization of practical experience results, in these documents, in a profound elaboration of such important questions as that of the complete and final victory of socialism in our country, the nature of the gradual advance of Soviet society to communism, the paths, time periods and stages in the solution of the major economic problem of the USSR, the creation of a basis for communism in material technology, the direction for development of, and mutual approximation of general public and collective-cooperative forms of property, the significance of personal material self-interest and the nature of distribution in the period of all-out upbuilding of communism, the development of the socialist state in the process of transition to communism, the laws of motion of the world socialist system toward communism, etc. All this testifies to the fact that our Party is powerful in the indissoluble, organic unity it maintains between theory and practice in economic and cultural development, and with the day-to-day needs of the development of Soviet society and the entire world system of socialism.

During a nine-day period, delegates to the Congress, representing more than 8,239,000 members and candidates for membership in the Communist Party of the Soviet Union, discussed the report by Comrade N. S. Khrushchev on figures for the further development of the national economy of the USSR in 1959-1965, from every point of view, and gave their unanimous approval to the stupendous objectives in the seven-year plan for the development of the economy and culture of our country.

The delegates to the 21st Party Congress unanimously approved the decisive measures of the Central Committee of the Communist Party of the Soviet Union which had exposed and ideologically routed the anti-Party coup of factionalist plotters Malenkov, Kaganovich, Molotov, Bulganin, and Shepilov, who attempted to destroy the unity of the Party, and to turn the Party and the country from the Leninist paths.

The seven-year plan will open a new and most important period in the development of the Soviet Union, a period of all-out upbuilding of communist society. The most important objectives during this period, it is noted in the decisions of the 21st Congress of the Communist Party, will be those of creating the basis for communism in material and technology, the further strengthening of the economic and defense capacity of our country, and simultaneously, an ever-increasing satisfaction of the growing material and spiritual needs of the Soviet people. This will be the decisive stage in the competition with the capitalist world, when the historic objective of overtaking and surpassing the most advanced capitalist countries in production per head of population is to be carried out for all practical purposes.

The seven-year plan is an organic part of the long-range plan of development of the economy and culture of the USSR during the next 15 years. The long-range plan is an economic program for the upbuilding of communism in the USSR. A gigantic leap in the development of the productive forces, changes in the structure of production and in the nature of labor, uplift in the material and cultural standard of living of the people, envisaged therein, will make the fundamental characteristics of communist society tangible. The economic program for the upbuilding of communism must assure attainment of such a level and such a structure of production, such a level of productivity of social labor, as will permit complete satisfaction of the needs of a culturally rounded person.

The long-range prospects for growth of ths USSR economy during the coming 15 years provide for the most important branches of industry to increase production by more than double or treble. The years of the seven-year plan now getting under way will represent the decisive stage in the realization of the grandiose objectives of the long-range plan. The following data are glorious testimony thereto. In 1965 annual smelting of pig iron in the USSR will attain 65-70 million tons or 82.4-86.7% of the objectives for the last year of the 15-year plan, output of steel will attain 86-91 million tons (75.8-86%). The volume of production of electric power in 1965 will be 57.8-61.5% of that in the final year of the long-range plan, that of oil will be 60-65.7%, that of coal 81.2-91.7%, that of cement 73.6-83.3%, and that of leather footwear 73.6-85.8%. In the production of sugar, our country will by 1965 attain the objectives originally set for the end of the 15-year plan.

The seven-year plan is a scientifically rational program for economic, political and spiritual development of Soviet society along the road to communism. The most important objective of the seven-year period in the economic field is the all-round development of the productive forces of the country, the attainment of such a level of production in all branches of the economy on the basis of priority development of heavy industry as will permit a decisive step in the creation of the material-technological basis for communism and will assure the triumph of the USSR in the peaceful competition with the capitalist countries. The strengthening of the economic potential of the country, the further technical progress in all branches of industry, the constant growth in productivity of social labor, are called upon to provide for a substantial increase in the living standard of the people.

The fundamental practical problem before our country today is to build the basis for communism in material technology, and to assure a new and forceful all-round upsurge of the socialist productive forces. Realization of this objective involves preparation of the decisive conditions for the transition from the first phase of communist society to the second phase.

Marxism-Leninism teaches that growth of the material forces of production underlies the development of human society. The development of the forces of production determines changes in relationships of production, the character and conditions of labor, and fundamental shifts in the totality of man's social life.

The basic condition for transition to communism is an increase in the level of production such as to enable society to be in a position to assure an abundance of material and spiritual goods for the complete satisfaction of the rising needs of the working people, and for their free all-round development. Only on the basis of attainment of an abundance of all consumer goods and of a change in the nature of labor, transforming it to the first necessity of life, will it become possible to realize the communist principle "from each according to his abilities, to each according to his needs."

The main source for the expansion of production under today's conditions is an unswerving rise in the productivity of social labor on the basis of continuous technological progress and uplift in the cultural and technical level of the working people. It suffices to note that in 1965 three quarters of the total increase in industrial production scheduled is to come from the rise in labor productivity. The rise in labor productivity in all the other branches of the socialist economy will also be of primary significance. The upbuilding of the material and technological basis for communism is chiefly directed toward assuring an unprecedented increase in labor productivity and basic changes in the conditions of work of all members of society.

The material and technical basis of communism will constitute a highly-advanced social production based on complete electrification, integrated mechanization and automation of the processes of production, the most complete possible utilization of new sources of energy, the richest of natural resources, and new synthetic and other materials. It will be characterized by perfection in the structure and form of organization of production and by a high level in the degree of socialization, specialization, and integration thereof.

The creation of the material and technical basis for communism is organically interconnected with improvement in the relationships of production in town and country. In the course of the upbuilding of this foundation, a number of exceedingly important social problems will be resolved. A gradual elision of the existing differences between manual and mental labor will occur with the further development of socialist production on its new foundation in material technology and with the upsurge in the cultural and technical level of the working people. The rise in the cultural and technical level of the working people, the reinforcement of the connection between education and life, and with production, will facilitate the reorganization of public education in the country to an extraordinary degree.

The degree to which collective farm production becomes publicly-owned production will rise with further development of the productive forces, and there will be an increasing identification of collective farm and cooperative property with general public property, a gradual erasure of the existing differences between town and country. The unswerving technological progress, and systematic introduction of the latest scientific and technological achievements will result in changes in the conditions of labor: a reduction in the working day, complete elimination of heavy physical labor in all branches of production, labor becoming a true source of joy and pleasure for the health all-round man.

In posing itself the magnificent objective of creating the material and technological basis for communism in a brief historical period, the Soviet people led by the Communist Party are inclined to make the decisive step in this direction within the current seven-year plan.

During 1959-1965, the productive forces of Soviet society will rise to a new level, on the basis of priority growth of heavy industry. The volume of industrial production will rise 80%, that of agricultural production 70%, and the volume of work of all branches of transport will expand considerably, while capital construction will attain enormous scope. Such rates of growth of production are unknown to any industrially developed capitalist country.

The enormous relative growth of industrial production occurring on the basis of the present level of industry in the USSR as its starting point will represent an exceptionally great absolute increase in output. During the seven-year period, approximately as much industrial output will be produced as during the entire period of existence of the Soviet government. In 1952, a 1% rise in industrial production (excluding small-scale subsidiary enterprises) represented 5 billion rubles, in 1959 it represents over 11 billion rubles and in 1965 it will exceed 19 billion rubles.

Maintenance of high rates of industrial development during the present seven-year plan completely overturns the dreamings of capitalist propaganda to the effect that as the absolute level of industrial production in the USSR increases, the rates of increase must, as it were, "damp ou This pseudo-scientific conclusion has long served bourgeois economists and sociologists as the basis for false evaluations of the course and perspectives in the competition of the two systems. Today the Soviet Union has advanced to a realization of the program envisaging such rates of economic growth as will enable it to overtake the most advanced capitalist countries of Europe and closely approach the United States in level of production per head of population. During this period, the rates of developmer of Soviet industry will, as before, be at a level unattainabl for capitalist countries. The Marxist-Leninist propositio to the effect that only under socialism is it possible for productive forces to expand without limit, today receives new and brilliant confirmation.

The development of the productive forces of the country during the current seven-year plan will be characterized significant qualitative changes in the structure of production and the productive apparatus.

In the first place, it is necessary to note the major unde takings envisaged in the field of all-round mechanization industrial and agricultural production. We know that desp the successes in mechanization of labor, and in the introducti of machinery and mechanisms into all branches of the national economy, manual labor remains a very significant portion of the whole in many fields of production. Even in so highly advanced a branch of industry as the manufactur of machinery, outlays of manual labor represent virtually half the total working time. The seven-year plan envisage completion of the all-round mechanization of the processe of production in industry, agriculture, construction, trans port, stevedoring, and public services, and the eliminatio of heavy manual labor on the basis thereof.

Integrated mechanization will create the conditions for large-scale automation of production, which is one of the

major trends in modern technological progress. Automation, and particularly integrated automation, results in an enormous rise in the productivity of labor, and in a serious change in its character. Under conditions in which social property rules, it will assure an uninterrupted rise in the well-being of the working people, and the solution of such major social problems as reduction of the work day, upsurge in the cultural and technical level of all members of society, and the gradual liquidation of the significant differences between mental and physical labor.

It is planned, in the years immediately ahead, to organize on a mass scale, highly-specialized production of modern means of automation, so as to attain complex automation in all branches of the national economy in the future.

The introduction of chemistry into production occupies a place of special significance in the seven-year plan, as does provision for speeded development of the chemical industry and broad introduction of chemical processes into various branches of the national economy.

Progress in the science of chemistry has today opened possibilities for the development of synthetic materials that are not merely "substitutes" for known raw materials but that substantially surpass natural products in their properties. The mass production and introduction of the products of the chemical industry in all fields of the national economy, and in particular of products of organic synthesis, is an important component part of the upbuilding of the material and technological basis of communism. With development of the chemical industry, there will occur substantial expansion of the raw material resources of branches of the processing industries. Moreover, products of the chemical industry are as a rule substantially cheaper than the natural materials they replace, and surpass the latter in their properties (strength, elasticity, etc.), are economical in use and longer lasting. Expansion of the production of mineral fertilizers, chemical means of combatting agricultural pests and weeds, will permit collective and state farms substantially to increase the yields of agricultural products. Thus, the development of the chemical industry makes for an overall growth in labor productivity in the national economy, and for a significant increase in the production of consumer goods.

The creation of the basis for communism in material technology assumes complete electrification of the country, and introduction of electrical energy on the widest scale in all the branches of the national economy and in the daily life of the Soviet people. The upcoming seven-year plan will be a decisive stage in realization of the Leninist idea of the complete electrification of our country. The plan envisages a rise in annual production of electrical energy to 500-520 billion kilowatt hours at the end of the seven-year plan. In industry, although the growth in production will be 80%, the consumption of electrical energy will be 120%, while the electrical energy available to industrial workers will rise almost 100%. Railways approximately 10,000 kilometers in length will be converted to electric traction, and electricity will be provided to all state farms, repair and equipment stations, collective farms, and workers' settlements. An extensive program of production and utilization of atomic energy for peaceful purposes is envisaged.

The most important branch of heavy industry, governing the rates of technical progress in the national economy as a whole, is the manufacture of machinery. The output in the machinery-manufacturing industry, and in metal processing, will virtually double during the seven-year period. This will make it possible to equip enterprises in various branches of the economy with new, high-output equipment, and fundamentally to improve the technology of production. The seven-year plan envisages accelerated development of all the modern branches of manufacture of machinery, and primarily of heavy machinery manufacture, instrument manufacture, production of means of automation and electronics.

Measures planned for consistent, economically justified specialization and integration of production, and cooperation among various branches of industry and enterprises, will play a special role in the upbuilding of the basis for communism in material technology, in raising the efficiency of production, and the level of productivity of labor.

The building of the basis for communism in material technology, the decisive foundations for which will be laid in the coming seven-year plan, is an outstanding triumph of the Soviet people, a creative people, a free and inspired builder of a new, communist life.

In the course of the creation of the material and technological basis for communism, one of the most fundamental economic problems of the present day, lying at the root of peaceful competition of the two systems — socialism and capitalism — will be finally resolved. The triumph of socialism in this historical contest will be of primary importance to the future of the entire world.

In the report of Comrade N. S. Khrushchev, it is noted that the Soviet Union has gone through a number of stages in its competition with the capitalist countries. In the first stage, which began with the great October socialist revolution, the problem of "who will beat whom," as formulated by Lenin, was successfully resolved in our country in favor of socialism. This meant the world-historic triumph of socialism and revealed its decisive advantages over capitalism. In pursuing its successes, the Soviet Union advanced far beyond the developed countries of West Europe in total volume of industrial production, as long ago as the eve of the Second World War. Socialism demonstrated its unassailable superiority over capitalism in the race of development of production.

The Soviet Union has now entered a new stage in economic competition with capitalism. Today the problem is that of attaining superiority for the socialist system over the capitalist system in total volume of production on a world scale, that of overcoming the most advanced capitalist countries in the productivity of social labor, in manufacture of products per head of population, and of attaining the world's highest living standard. During this stage, the Soviet Union is to overtake, economically, the richest and most highly developed country of the contemporary capitalist world — the United States of America.

The economic competition of the USSR and the USA, and the periods during which the fundamental economic problem before our country will be solved, are determined by two major factors: the initial level of production in each of these two countries and the prospects for their economic development in the years immediately ahead.

During the years of Soviet power, the ratio of the levels of production in the USSR and the USA has undergone a fundamental change. In 1913, Russia lagged behind the USA in scale of industrial production per head of population by a factor of 13 or 14, while today the USA is little more than twice as advanced as the USSR in this respect. This change in the ratio of scale of production per head of population will permit the Soviet Union to solve its fundamental economic task in the years immediately ahead, for all practical purposes.

The Soviet people has always been confident in its creative powers, and in the fact that the colossal advantages of the socialist economic system would make it possible for our country to draw even with and then to surpass the most

advanced capitalist countries economically. Today we are in a position to speak with confidence not only of the fact that we will overtake the major capitalist countries but can define the specific time periods during which the major economic task before the USSR will be resolved.

According to the calculations of Soviet economists, who have based themselves on a study of the contemporary state of the American economy and the tendencies of development therein, industrial production in the USA will rise by an average of 2% per year in the years immediately ahead. In the USSR, the average annual rate of increase in industrial production during the current seven-year plan will be approximately 8.6%. There can be no doubt of the fact that this rate of increase in industrial production will not only be attained but surpassed.

On the basis of the level of industrial production attained in our country, and the rates of development planned, the USSR will, as a result of fulfillment of the seven-year plan, exceed the USA in gross production of certain major items and in others come close to the present level of its production. Within this period also, a serious advance will be made in the development of socialist agriculture. Our country will exceed the present level of the USA in the production of the major agricultural products and in their output per head of population. All this will permit us, in the course of about five years after completion of the seven-year plan, and probably earlier, to emerge in first place in the world both in absolute volume of production and in production of industrial and agricultural products per head of population. This will resolve the basic economic task of the USSR, and this will mean a world-historic triumph of socialism. All the countries of the socialist camp, which unites approximately one third of the population of the globe, are building the new life together with the Soviet Union in a single happy family. Thanks to the advantages of the socialist economic system, these countries, like the Soviet Union, considerably surpass the most advanced capitalist countries in rates of economic growth. According to the calculations of economists, the result of the fulfillment and over-fulfillment of the seven-year plan for the development of the national economy of the USSR, and the high rates of development of the economies of the countries of People's Democracy, will enable the countries of the world socialist system to produce more than half of the world's industrial production. Thus, the superiority of the world system of socialism over the world system of capitalism will be assured in the decisive sphere of human activity — the production of material goods. This will create important prerequisites to permit all the countries of the socialist camp to make the transition from socialism to communism at approximately the same time.

A fundamental problem in the present seven-year plan is that of gaining maximum time in the peaceful economic competition of socialism and capitalism. At all stages in the upbuilding of socialism, the Communist Party of the Soviet Union gave primary attention to accelerated rates of development of the most important branches of the economy. Only as a result of rates of growth unknown under capitalism, has it been possible for our country, in a brief historic period, to overcome its age-old backwardness in economics and technology, and to become one of the world's great industrial powers.

The headlong rates of economic development in the current seven-year plan are founded on further profound qualitative changes in the structure of all the branches of the national economy. The seven-year plan envisages such relationships in the development of branches of the economy as would yield a maximum effect in production with minimum outlays of social labor and material resources. The targ figures for 1959-1965 are characterized by scientifically founded proportions such as to assure the real fulfillment of the seven-year plan in all the branches of the national economy of the USSR.

Economy in time, and economy in concrete and abstrac labor are inherent in the socialist system of economy an refect its decisive advantages over capitalism.

The planned development of the socialist economy permits society to develop its resources to the upbuilding, with first priority, of those branches that in the given period assure maximum acceleration of the development of the national economy as a whole, continuous technical pro ress, and the maximum improvement in labor productivity.

During the present seven-year plan, proceeding from t level attained and the structure of production that has co into being, capital investments are planned so as to increase productive capacities at minimum cost and to rais the output of production in the briefest possible periods, with a sharp rise in labor productivity and reduction in cost of production. The control figures fully reflect the vast role of scientific and technological progress in improving production during the present period. The seven-year plan envisages rapid and most effective utilization i the national economy of the outstanding achievements of theoretical natural science and the engineering sciences.

An example of the structural changes characterizing th further upsurge in the economic efficiency of Soviet indus try may be indicated by the development of the fuel and power base for the national economy envisaged by the pla The share of the cheapest and most calorific types of fue (gas and petroleum) in the total fuel balance will rise fro 31% at the present time to 51% in 1965, while the share o coal will drop from 60% to 43%, despite the absolute rise its production. The total economy from replacement of coal by natural gas and petroleum in fuel balance will be over 125 billion rubles in the seven-year period.

A gigantic program of electrification of the country wil be carried out at minimum cost. So as to gain time in th economic competition with the capitalist countries and to make the most effective utilization of capital investments the seven-year plan envisages priority construction of thermal power plants using natural gas, heavy oil, and cheap coals. In addition, a number of highly-efficient hydroelectric plants will be built, although the share of i vestments in hydroelectric construction will diminish somewhat. This policy in electric power development wi yield significant economies. If the ratio between capital vestments in thermal and hydraulic electric power plant that had come into being during the preceding years had been preserved in the coming seven-year plan, it would b necessary either to cut down the power capacities sched uled to go into operation or increase capital investments f power development by more than 20 billion rubles.

A characteristic feature of the seven-year plan is a ma jor program of reconstruction, expansion, and technical equipment of existing enterprises. This reconstruction will mean the creation of a qualitatively new technology a existing enterprises. An extension in the introduction of new technology into the national economy, to embrace not only enterprises to be built from scratch, but also enterprises already in operation, is of tremendous significanc for increasing the productivity of social labor, and for accelerating development of the socialist economy on the path to communism.

A correct distribution of the forces of production acro the country's territory is of utmost significance in

increasing the efficiency of capital investments and attaining maximum economy in social labor. In resolving problems of distribution of production, the Party bases itself on the Leninist principles of nationality policy, and proceeds from the need for rational utilization of natural resources and the economic conditions of the various republics and districts of the country. The Leninist nationality policy finds new expression in the seven-year plan, which provides for development, in each republic, chiefly of those branches of the economy for which the most favorable natural and economic conditions exist. This will permit more efficient utilization of the resources of the republic and will provide a correct correlation of local and union-wide interests. The plan envisages a strengthening of economic ties among the republics, and an increase in the regional division of labor within the national economy.

A further step in solving the problem of utilization of the vast raw materials and power resources of the eastern districts will be taken during the seven-year plan. More than 40% of all capital investments will go into these districts. In 1965, the share of the eastern districts in coal production will rise to 50%, in steel to 48%, in refined copper to 88%, in aluminum to 71%, in cement to 42%, and in electric power production to 46%, in lumbering for use beyond the area of production to 52%, and in paper manufacture to 32%. Work will get under way toward the creation of a third center of the iron and steel industry in Siberia and Kazakhstan, and the world's largest hydroelectric plants will be built along the Angara and the Yenisei. The successes achieved in opening virgin and idle lands will be nailed down.

The accelerated development of the eastern districts, which are distinguished by the exceptional richness and variety of cheap raw materials and sources of power, makes possible, at minimal capital investment, an increase in the production of the most important products of heavy industry, a reduction in excessively long and irrational hauls, a more uniform distribution of industry across the territory of the country, and a further rise in the material well-being and the cultural level of the peoples of the nationality republics of the east.

Major changes in the distribution of the productive forces in the interests of efficient utilization of natural resources and labor supplies and of the economic possibilities of each republic and region will be accompanied by an increase in specialization and integration of production both within the individual territorial economic complexes and between them. The seven-year plan envisages a further concentration of production of identical products in a minimum number of enterprises. For example, specialization in the production of metal products, of blast furnace and steel melting equipment, of castings, forgings, stampings, and other intermediate products for the manufacture of machinery will be extended. This will make it possible to increase considerably the production of turbines, generators, steam boilers, tractors, and other machines, without the construction of new enterprises. An increase in the specialization of enterprises will make for a further strengthening of economic ties among the republics and economic districts.

As distinct from capitalism, where the international and inter-regional division of labor occurs in antagonistic and distorted forms, and leads to stagnation or exceedingly narrow specialization of individual countries and districts that are particularly backward economically, the socialist economic system assures all-round utilization of natural riches and a multi-faceted development of the forces of production in all the nationality republics and districts of the country. The complex development of production must be combined with a wise and economically profitable specialization of the regions.

The program for developing the various branches of transport is subordinated to the objectives of correct distribution of productive forces and strengthening of inter-district ties. Freight turnover on the railroads will rise 39-43% during the seven years, while the bulk of haulage will be done by electrical and diesel engines. As a result of introduction of high-speed multi-passenger equipment, air transport will become one of the major forms of passenger transportation. Maritime and river shipping, as well as the national pool of trucks and passenger automobiles, will undergo considerable supplementation and replacement.

In the field of agriculture, the basic task is attainment of a level of production that will make it possible to satisfy completely the needs of the population for food, and industry for raw materials, and will meet all the other needs of the state for agricultural products. This problem has to be solved in the first place by a significant increase in the yield of all agricultural products, an increase in the head of cattle, and further increase in the productivity of public livestock raising. During the seven-year plan, while there will be a general increase in the gross production of agriculture by 70%, the production of the most important types of produce is to be raised to the following levels: grain to 10-11 billion poods, sugar beets to 76-84 million tons, raw cotton to 5.7-6.1 million tons, meat (slaughterhouse weight) to not less than 16 million tons, milk to 100-105 million tons, potatoes to 147 million tons, and vegetables to a scale that will completely satisfy the needs of the population.

Successful solution of the great tasks before agriculture in the current seven-year plan requires the strengthening by every possible means of the public economies of the collective farms, and the carrying out of major measures for further mechanization and electrification of agricultural production, improvement of the organization of labor, and, on that basis, assurance of significant increase in labor productivity and reduction in the cost of agricultural production. The role of the state farms as the leading socialist enterprises in agriculture will undergo a further increase.

The further development of agricultural production will be accompanied by an improvement in the socialist relationships of production, and in a mutual approximation of the two forms of socialist property — collective farm and general public — which will, in the course of their development, merge into a single, communist property. This process is expressed in the first place in the continuous quantitative growth and qualitative change in the indivisible funds, which represent the foundation of collective farm and cooperative property and a most important resource for the development of the public economies of the collective farms. This will lead to a further rise in the level of socialization of collective farm production and a gradual dying out of the personal plot farms on the collective farms. The increase in indivisible funds will provide possibilities for cooperation by the collective farms in production to resolve problems beyond the capacity of any single cooperative. Intercollective farm relationships of production will develop ever more widely. They constitute one of the most important stages in the uplift of collective farm and cooperative property to the level of general public property. In the course of the electrification of agriculture, and the mechanization and automation of production, there will occur a peculiar and unique merger of means of production owned by the collective farms and those owned by the government, agricultural production undergoing a gradual transformation into a variety of industrial production. The conditions

of agricultural labor will come to approximate those of industrial labor ever more closely. The merger of general public and collective farm property into a single communist property will also signify elimination of the boundaries between two classes — the workers and peasants, and liquidation of the significant differences between town and country.

A substantial increase in the living standard of the Soviet people will be assured on the basis of the significant rise in all branches of industry and agriculture, the unswerving progress in technology, and growth in the productivity of social labor.

Socialism has long since demonstrated that its highest objective is that of improving the well-being of the working people by every possible means. This is testified to by the history of the Soviet socialist government, and by the development of all the socialist countries. Socialism makes for uninterrupted increase in the living standard of the people with the development of production. Herein lies the tremendous superiority of the socialist system. Such a relationship between the development of production and public consumption has been unknown in past history. It is known that under capitalism, growth in production leads to enrichment of the dominant classes and is accompanied by absolute and relative impoverishment of the working people. Only socialist society assures harmonious development of production and consumption, ever more fully satisfying the material and spiritual needs of the working people.

At all stages in the upbuilding of socialism, the Communist Party has been true to the policy of systematic improvement in the living standard of the Soviet people. Of course, the possibilities for increase in popular consumption were limited during the years of the first five-year plans. During this period the Soviet people was compelled conscientiously to make sacrifices, and to direct the bulk of its cumulations into the national economy for the creation and enlargement of heavy industry. This was dictated by the need to eliminate in the briefest historical period the technical and economic backwardness of the country inherited from pre-revolutionary Russia, to strengthen the defense capabilities of our country and its economic independence from the capitalist world. Today, our country is in possession of a powerful industry, developed in all directions, and a strong and highly-mechanized agriculture. The development of these most important branches of material production assures a rapid rise in social wealth and in the national income of the people. All this creates the prerequisites for a serious rise in the living standard of the Soviet people in the years immediately ahead.

During the current seven-year plan, the national income of the USSR will rise 62-65%. This will make it possible to increase the fund for popular consumption by 60-63%. In this connection, we cannot forget that in its physical volume, each percent of increase in the consumption fund is substantially greater than during any prior period in the development of our country. Thus, one of the most important features of the seven-year plan is an unprecedentedly high rate of increase in consumption on the part of the Soviet people.

Under socialism, the bulk of the consumption fund is distributed among the members of society in accordance with the quantity and quality of the labor they perform. Distribution in accordance with labor is an objective principle of socialist society. It serves as a most important material stimulus for continuous and rapid increase in the socialist forces of production. Distribution in accordance with labor creates a personal material incentive for each worker in the results of production, in increasing his qualifications, and in improving technology and the organization of production. The vast importance of the principle of personal material incentive lies in the fact that it educates workers to socialist labor discipline, making labor universal and compulsory. Thus, the socialist principle of distribution, along with the development of social stimuli to labor, creates the prerequisites for converting labor into the first necessity in human life.

The Communist Party decisively rejects all efforts to substitute an equalitarian distribution for distribution in accordance with work performed. Equalitarianism would undermine material stimuli to labor to increase in its productivity, and to an increase in the production of material and spiritual goods. It would not only not accelerate progress toward communism, but would deprive society of a most important base which serves to advance production.

The 21st Congress of the Communist Party of the Soviet Union again emphasized, most strongly, that distribution in accordance with work done, and a consistent realization of the principle of personal material incentives will remain an objective necessity during the entire period of speeded upbuilding of communist society and will serve at all times the objective of continuous upsurge in socialist production.

The current seven-year plan envisages a substantial rise in the incomes of the workers, office workers, and collective farm peasantry. This measure is based on a further expansion of production, and a growth in labor productivity in all branches of the national economy. The increase in the wages of the low paid and medium paid workers and office workers will be particularly marked. This will constitute a concrete expression of the Party's policy directed toward reducing the gap in the living standards of various groups of working people, while bringing about a general rise in the living standard of the people, which is one of the necessary prerequisites for transition to communist distribution in accordance with need. During the seven-year plan, it is planned to complete the reorganization of wages and salaries begun during the last few years. This will mean not only elimination of shortcomings in the system of payment to labor, but a change in the ratios among wage scales paid to various categories of workers. During the seven-year plan, the monetary wage of low-paid workers and office workers will rise from 270-350 to 500-600 rubles per month. There will also be some increase in scales and salaries to workers and office workers receiving middle categories of payment.

On the whole, the real incomes of workers and office workers, calculated per worker, will rise an average of 40% during the seven years (with allowance for pensions and social assistance and further reduction of prices in public eating places). The real incomes of collective farmers will rise by not less than 40%. Taxes on the population will be repealed in the immediate future.

The increase in the monetary incomes of the working people will signify a real growth in popular consumption, inasmuch as there will be a corresponding increase in the volume of commodities for sale to the population. From year to year, the working people of town and village will be able to purchase ever increasing quantities of commodities meeting their demands and needs, in government and cooperative stores. During the seven year period, the retail volume of government and cooperative trade will rise by approximately 62%, or by 400 billion rubles. Whereas in 1958, the population daily purchased 1.8 billion rubles worth of industrial commodities and foodstuffs, in 1965 the daily purchases will be approximately 3 billion rubles. Per head of population, retail trade will increase 50% during the seven year period.

This is the quantitative aspect of the matter. No less

important is the fact that the structure of the commodity turnover will change significantly. Thus, there will be a particular rise in the sale of foodstuffs of high value: meat, milk, butter, fish, sugar, fruits, etc. During the present seven-year plan, a decisive step will be taken for the attainment of such a level of consumption of these products as will correspond to scientifically rational physiological standards of diet. There will be a substantial increase in the sale to the population of the most important industrial commodities: fabrics, clothing, underwear, footwear, and commodities for cultural, household and productive purposes. The quality of these products will increase even further.

One of the most important principles in increasing the well-being of the working people during the period of transition to communism lies in improving the role and significance of social funds of production. Engels wrote that as the new society which will replace capitalism develops "the means of livelihood, the means of pleasure, the means of improving and applying all physical and spiritual capacities will come increasingly into general distribution..." (Karl Marx and Friedrich Engels, Selected Works, Volume I, Government Printing Office for Political Literature, 1955, p. 52) (Russian Edition)

The seven-year plan envisages a substantial change in the structure of the consumption fund, with an increase in the share of public funds for servicing working people in all aspects of public income. Up to 360 billion rubles, or 60% more than in 1958, will be spent in 1965 for social insurance, social assistance, pensions, stipends to pupils and students, free education, medical services, vacation pay, expenditures upon boarding schools, upon maintenance of kindergartens and day nurseries, sanatoria, rest homes, homes for the aged, and other payments and benefits. Per worker, these expenditures will come to approximately 3,800 rubles a year. In addition, more than 800 rubles will be spent per worker per year on the construction of housing, schools, cultural and service, and medical institutions, by the government. "In the future," says Comrade N. S. Khrushchev in his speech at the 21st Congress of the Communist Party of the Soviet Union, "expenditures by the government for these purposes will increase. As we move toward communism, the concern of society for each human being from birth to advanced age will increase."

Expansion of the network of public eating places, and improvement of the quality of their work, will play a particular role in raising the living standard of the Soviet people during the current seven-year plan. Output by public eating enterprises will more than double by the end of the seven-year plan. Public eating will be provided for the majority of workers, office workers, and students. The objective of sharply increasing the quality of the food prepared, and of reducing its price is being posed. Realization of these measures to increase the network of factory kitchens, restaurants and catering enterprises in higher educational institutions, schools, public restaurants in apartment houses, and on improvement in the assortment and quality of meals, will make possible a sharp reduction in housework, which is of low productivity, and an increase in time for recreation, and for raising the cultural standards of the working people. Further development of public eating and improvement in the cultural services to and the service facilities for the population will create favorable conditions for wider participation by women in productive activity and in the social and political life of the country.

The necessary prerequisites for a basic improvement in the housing conditions of the people are being created in socialist society. Under capitalism, the need for housing, and high rents, constantly pursue the worker. Under the conditions of socialism, the bulk of the expenditures upon construction and maintenance of housing is undertaken by the government. During the present seven-year plan, 375-380 billion rubles (almost 1/5 of all capital investment by the government in the national economy) will be assigned from the government budget for housing and civic construction. In 1957, the Communist Party and the Soviet government adopted a detailed program for housing construction in our country, with the objective of doing away with the housing shortage for the working people in the next 10-12 years. This program will be carried out to a considerable degree during the present seven-year plan. In 1959-1965, housing to a total of 650-660 million square meters, or about 15 million apartments, will be built. This means that 6,000 apartments will come into occupation each day on the average. Approximately 2/5 of the population of the USSR will be rehoused during the seven-year plan.

Provision of well-designed homes, organization of public eating, improvement in services, expansion in the network of children's institutions, improvement in public education, organization of recreation and improvement in medical services to the population, building of cultural institutions, etc. represent the truly communist course toward improving the well-being of the people.

One of the greatest triumphs of socialism is the fundamental transformation of the conditions of labor. Placing as its objective, the free and all-round development of the personality, the socialist society concerns itself with systematic improvement of the conditions of labor, and with transformation thereof into a means of continuous development of the physical and spiritual forces of man. Among the measures leading to a tremendous transformation of the conditions of labor, reduction in the work day plays a most important role.

A significant step toward reduction in working time will be made during the present seven-year plan. As early as 1960, transfer of workers and office workers to a seven-hour work day, and of workers in the major trades in the coal and ore mining industry underground to a six-hour day, will be completed. Starting in 1964, there will begin the gradual transfer of workers in underground work and on jobs with harmful conditions of labor to a 30-hour work week, and of all other workers to a 35-hour work week. The reduction in the working day and the working week will not only improve the conditions of labor, something that will have an exceptionally favorable effect upon the physical capacities of workers, but will also lead to improvement in free time. Under the conditions of socialism, this will serve as a real factor in improving the spiritual culture of man. In this connection, it is necessary to note that the measures being carried out by the Party and government to improve the educational system, and in particular the line taken toward expansion of correspondence and evening educational institutions, will be able to be realized substantially because of the reduction in the work day. By contrast to capitalism, where a reduction in the work day means, in essence, partial unemployment, and results in a reduction in wages, under socialism a reduction in working time is accompanied by an increase in the incomes of the working people. This principle will manifest itself with particular force in our country in the seven-year plan immediately ahead. The Soviet Union will have the world's shortest work day, and a simultaneous rise in the living standard of the people.

The continuous improvement in the conditions of labor will be assured by all-round mechanization of the processes of production in all branches of the national economy, by

complete elimination of heavy manual labor, by increasing the extensive introduction of means of automation, improvement in safety techniques, etc.

The realization of the program of increasing the material well-being and the cultural level of the people, laid out by the Party, is a new and very great triumph on the part of our country on its path toward the upbuilding of the communist society. It will serve as one more clear proof of the unassailable advantages of the socialist system of economics as compared to the capitalist system, that has outlived its time.

Realization of the magnificent objectives of the seven-year plan requires the fullest mobilization of the internal resources of the national economy. With the increase in the scale of social production, there will be a greater increase in the significance of economies of expenditures of materials and labor. Successful fulfillment of the planned objectives requires a significant improvement in activity in the field of economics in all branches of the economy. The 21st Congress of the Communist Party of the Soviet Union emphasized the need to develop a national struggle against all manifestations of unbusinesslike attitudes, wastefulness, for a thrifty attitude toward national property, and increase in the responsibility of managerial personnel for improvement in the qualitative indices of the activities of their enterprises, and in particular for reduction in cost and increase in the quality of production, further reinforcement of cost accounting in industry, construction, in transportation and in agriculture.

Successful fulfillment of the seven-year plan requires active participation of representatives of all branches of science, including economists, and the solution of the problems involved in the further all-round development of the productive forces of the country. At the 21st Congress of the Party, the work of the scientific research institutes in the field of economics and, primarily, of the Institute of Economics of the USSR Academy of Sciences was subjected to just criticism. Our science of economics still lags behind the requirements of the rapidly progressing national economy, and of the current problems of the upbuilding of communism. Many scientific research institutions in the field of economics, and the Institute of Economics of the USSR Academy of Sciences in particular, take inadequate part in the solution of the important problems advanced in the day to day practice of economic upbuilding. Thus, for example, the Institute of Economics has for a long time been engaged with problems of the methodology of determining the economic efficiency of capital investments in the national economy, but has not offered specific recommendations to practical workers to this day. Investigation of the problems of expanded socialist reproduction is inadequately linked with problems of planning, and the real demands of economic development. Also weak are the studies and generalizations from the experience of industry under the conditions of today after reorganization of the management of industry and construction. It is particularly necessary to call attention to the lag on the part of the Institute of Economics in elaborating problems of agricultural economics. While the Party has developed fundamental measures for further development of the collective farm system, for establishment of new forms of interrelations between town and country, the Institute of Economics has continued to concern itself with forms and methods of management that are outdated and do not correspond to the conditions of today. The most important reason for the backwardness of the science of economics is the weak tie between the research institutes and practical life, with planning and managerial agencies, with industrial and agricultural enterprises.

In his report at the 21st Congress of the Communist Party of the Soviet Union, N. S. Khrushchev noted that the science of economics faces the problem of creative generalization and bold theoretical solution of new problems pro pounded by life. The investigatory work of Soviet economists should be directed toward seeking out and utilizatior in all possible ways of resources for acceleration of the economic upsurge of our country, and for maximum gain i time in the peaceful competition with the capitalist world. The center of attention of the science of economics should be upon questions of systematic increase in the efficiency of production, in capital investments, optimum coordinatio of growth in the various branches of the national economy, the most rational distribution of the productive forces, etc It is particularly important that economic investigations b brought to the required level of concreteness as this would be of real assistance in the solution of the most important problems facing the national economy.

The success of the seven-year plan will be resolved directly at the enterprises and construction projects, in the collective and state farms. The great Lenin saw, in the creative activities of the masses, and in the heroic and self-sacrificing labor of the people, the guarantee of the fulfillment and over-fulfillment of government plans. As far back as the period when the GOELRO Plan was compiled, he emphasized the need for attracting the attention of the masses by a real, long-range plan for the upbuilding of communism. After this plan is elaborated, noted Lenin, th most important thing is the ability to call forth competitio and initiative on the part of the masses so as to get them t take this matter up instantly. "In following up the experiments of scientists and practical workers," V. I. Lenin taught, "on the spot, it is necessary to strive without ceasing to fulfill the plan ahead of time... This depends upon us Let us improve the economy in every workshop, and at every depot, and this will permit us to shorten the time pe riods required." (Collected Works, Vol. XXXI, p. 479) [Russian Edition]

The entire Soviet people, all enterprises, construction projects, collective farms and scientific institutions are in volved in the struggle to fulfill the objectives of the seven-year plan. Each collective is called upon to make its contributions to this national cause. Toward this end, as was emphasized in the report by Comrade N. S. Khrushchev at the 21st Congress of the Communist Party of the Soviet Un ion, it is necessary to define the objectives to be reached by each collective on its sector of the front. Clarity as to objective, specificity raised to the very limit; that is of prime importance in the present stage of the socialist com petition engaging the activities of the entire people.

The Communist Party is mobilizing the masses of the people for fulfillment of the objectives of the seven-year plan ahead of time. It supports and develops the initiative of the working class, the collective farm peasantry, and of all working people, and directs their efforts in the fulfillment of government assignments to each enterprise. The movement of brigades of communist labor, that has developed on the basis of the initiative of the glorious youth of the Soviet Union, is of immense importance. This movement coordinates the struggle for a labor productivity high er than that existing under capitalism and an effort to rais the cultural and technological level of the workers, along with their activity in public affairs, and with observation o the rules of communist society.

The new rise in socialist competition, the assistance tha must be given in every possible way to the patriotic innovations of forward-looking workers, the dissemination of

(Continued on Page 88)

N. Lagutin and V. Skuratov

The National Income of the USSR and its Utilization in the Seven-Year Plan

The grandiose program for the construction of communist society outlined in the decisions of the 21st Congress of the Communist Party of the Soviet Union inspires the Soviet people to new feats of labor. The target figures for the development of the national economy of the USSR in 1959-1965, confirmed by the Congress, envisage a further mighty upsurge of the economy and culture of our homeland, and a significant improvement in the living standard of the Soviet people.

The national income is a generalized index characterizing the level and rates of development of the national economy of a country and the increase in the material well-being of the working people. The enormous point of superiority of the planned socialist economy is clearly manifested in the higher rate of increase in the national income of the USSR than those of capitalist countries. In 1958, the national income of the USSR per head of population was 15 times greater than in 1913, while in the United States the figure for 1957 was less than double that of the earlier year, while for England and France it was approximately 1.7% of the earlier figure. The national income of the USSR has been rising at rapid rates since World War II. From 1952 to 1957 the average annual rise in national income per head of population in our country was 8.4% while in the United States it was only 0.7%, in England 2% and in France 4%.

In absolute level of national income, the USSR came to occupy second place in the world, still behind the USA. The rapid rates of development of all branches of the socialist economy will enable the Soviet Union to overtake and surpass the United States in national income in a very brief historical period. After our country attains the American level of production of the most important items of industrial and agricultural production per head of population, the Soviet Union will also attain first place in the world in national income per head of population. Thus we will attain the world's highest living standard for our people. The bulk of the distance separating the USSR and the USA in national income per head of population will be closed in the period of 1959-1965.

During the years of the seven-year plan, the national income of the USSR will rise between 62% and 65%. In 1965 it will be between 35 and 36 times as great as it was in 1913. The growth in the national income will be founded on high rates of expansion of all branches of the national economy. The development of the economy of the USSR in 1959-1965, when compared with the preceding seven years (1952-1958) is described by the following data (see below).

In examining the rates of development of the national economy in the present seven-year plan, it is necessary to take into consideration that each percent of growth of production and of the physical volume of the national income represents a substantially greater magnitude than during previous periods. The growth in the physical volume of the national income for 1959 to 1965 will be 30% greater than during the preceding seven-year period.

Of significant importance is the fact that the planned growth in the national income will be attained while a reduction in the work day will be in progress, and at the same time, there will be a substantial increase in the number of personnel engaged in education, public health, and other fields providing cultural and other services to the population, as well as during a period when an increased percentage of capital investments will be in unproductive construction, primarily housing.

The increase of the volume of production of national income will be accompanied by significant shifts in its social and departmental structure. During the seven-year plan, the share of the government sector of the national economy will increase in its contribution to the national income. This is explained by higher rates of development of industry and other branches of the government sector of production.

As to the departmental structure of the national income, the share of industry will increase somewhat in the creation of the national income during the current seven-year plan. This will occur due to the rapid rates of development, the substantial rise in labor productivity, the more rational utilization of material resources, and also in connection with the fact that a whole number of operations currently being performed chiefly in the sphere of commerce (for example, the packaging of commodities) will be performed to a substantial degree in industrial enterprises manufacturing consumer goods. The role of construction in the creation of the national income will increase substantially as a result of the realization of the vast construction program and the increase in labor productivity in this branch.

The role of agriculture in contributing to the national

	1958 as % of 1951	1965 as % of 1958	Average annual increase	
			1952-1958	1959-1965
Gross Industrial Production	212.0	Approximately 180.0	11.3	Approximately 8.6
Gross Agricultural Production	151.8	170.0	6.1	7.9
Government Capital Investments	220.8	180.0[1]	12.0	8.75[1]
Turnover of Transportation, All Forms	194.6	158.2 - 162.4	10.0	6.8 - 7.2
National Income	193.6	162 - 165	9.9	7.15 - 7.4

1) Capital investments in 1959-1965 as % of capital investments in 1952-1958.

income will rise during the seven-year plan. This is explained by the fact that the percentage of net income in gross agricultural production will rise more rapidly than in other branches of the national economy, due to the planned substantial increase in the yields of agricultural crops and the increase in productivity of stock farming.

Significant changes will occur in the structure of the national income as created in agriculture itself. As collective farm production, which is now coming to be based on modern equipment and has numerous highly-skilled personnel at its disposal, develops, the material and service requirements of the collective farmers will be satisfied to an ever-increasing degree from the commonly-operated portion of the collective farm economy, and the personal plots of the collective farmers will gradually lose their significance. During the current seven-year plan, there will already be a substantial increase in the share of the national income produced in the publicly-operated economy of the collective farms, and a corresponding reduction in the share of the private plots of the collective farmers. The contribution of private gardening by workers and office workers to the national income of the country will diminish sharply.

As we know, rise in national income is determined by two major factors: increase in the number of persons engaged in the branches of production of material goods, and increase in the productivity of labor. The rise in the productivity of labor is today the main source for expansion in the output of goods, and in the increase in national income. During the fifth five-year plan and the first two years of the sixth five-year plan, about 80% of the increase in the physical volume of the national income in the national economy as a whole was attained by increased in the productivity of social labor. During the current seven-year plan, the significance of increase in labor productivity as a factor in increase in the production of goods and of the national income will rise even further. Increase in productivity of labor will yield not less than 90% of the rise in the social product in the national income of the country. In industry 3/4 of the total rise in production, and in agriculture the entire rise will result from increase in labor productivity (that is, without counting the increase in the number of persons engaged therein). From 1959 to 1965, it is planned to increase labor productivity in industry by 45-50%, in construction by 60-65%, in the state farms by 60-65%, in the collective farms approximately 100%, and in railway transport by 34-37% (without consideration of the reduction in the workday).

It is important to note that, while the rates of increase in labor productivity during the present seven-year plan will be somewhat lower than in the preceding seven-year plan, the absolute value of each percent will increase very sharply. From 1959 to 1965, a rise of 1% in labor productivity in industry will yield 12 billion rubles of additional production, whereas during the preceding seven years, a 1% rise in labor productivity meant a rise of 5.4 billion rubles in industrial production.

Attainment of the increase in the productivity of socially applied labor planned for the seven-year period, and consequently, of the increase in national income will be assured by the continuous development of technology, the completion in the years immediately ahead of introduction of all-round mechanization, further automation of production and the utilization of a more progressive technology therein, improvement in the branch-by-branch structure and territorial distribution of production, and the development of specialization and integration in industry. The increase in the proportion of the labor force engaged in branches of industry with higher labor productivity (chemical, petroleum, gas, etc.) will be of substantial significance in increasing the social productivity of labor. An analogous effect will be provided by the increase in the number of workers in the eastern portions of the country, where inexhaustible reserves of cheap power sources are concentrated, along with vast natural resources, and exceptionally favorable circumstances for the exploitation thereof exist.

In addition to increase in labor productivity, an important role in increasing the national income is due to be played by the rise in the number of persons engaged in the national economy. At the end of the seven-year plan, the number of workers and office workers will rise by approximately 12 million people over the level for 1958, or 22%. The average annual increase in the number of workers and office employees engaged in the national economy will be 2.9% from 1959-1965.

Improvement in the distribution of the labor force among the various branches of industry, and in particular, increase in the numbers of the population engaged directly in fields of material production, are of exceptional importance for more complete meeting of the needs of the national economy as far as labor is concerned. A special feature of the distribution of the gainfully employed population among the various spheres of the socialist economy is the fact that simultaneous with increase in the number of the personnel in the branches of material production, there is an increase in the number of personnel engaged in science, education, arts and public health. Suffice it to say, that of the able-bodied population working in the non-productive sphere, more than one half is in culture and public health in the USSR, while in the United States these fields occupy only 1/7 of the persons in the non-productive branches. The number of persons engaged in administration and managerial functions in our country is dropping not only relatively but absolutely. Thus, from 1951 to 1957, although there was an increase in the number of workers in the field of material production, as well as in the field of education and public health, the personnel engaged in administrative and business management dropped by almost 30%. This tendency, in the distribution of the able-bodied population among these fields of activity, will be pursued further during the seven-year plan.

One of the important sources for satisfaction of the need of material production, as far as labor power is concerned, will, during the upcoming seven-year plan, be further involvement in social production of portions of the population now engaged in household and auxiliary activities. This will be facilitated to a considerable degree by realization during the seven-year plan of measures for improving the cultural and household servicing of the population in city and town (construction of a large number of kindergartens, day nurseries, further expansion of the system of enterprises for public feeding, of enterprises for service occupations, extension of social assistance, etc.).

An important condition for increase in the physical volume of the national income is increase in the skills of the working people engaged in the various branches of the national economy, inasmuch as we know that skilled labor creates greater value than unskilled in unit time. In 1959-1965, there will be a substantial increase in the training of skilled workers, and of persons of specialized qualifications with higher and secondary specialized educations. The higher educational institutions will graduate 40% more persons with specialized training than in 1952-1958. The increase in engineers for industry, construction, transportation and communications will be 90%, and that of specialists in agriculture 50% more than during the preceding seven years. The graduation of specialists in the most

important branches of industry will show the largest rate of increase. Reorganization of the system of public education will be of importance, and its result will be that young people coming to work at various enterprises will possess both a complete secondary general and a polytechnical education, as well as specialized professional training.

The national income is a totalizing index characterizing the end result of the process of expanded socialist reproduction. In turn, its distribution determines the rates of development of the national economy and the increase in the material well-being of the working people. The national income is a source for the formation in the first place, of the primary incomes of the population, productive enterprises, and the government. Subsequently, as the result of processes of redistribution, the national income created in material production gives rise to the incomes of non-productive branches, and of the personnel engaged therein. The high rates of growth of the national income serve as the basis for increase in all forms of primary incomes: the wages of workers in the government-owned enterprises, and the incomes of the collective farmers, the net income of government-owned enterprises and of collective farms, and the centralized net income of the government. Thus, the average wage of workers and office workers will rise 26% during the seven-year period, while if one considers pensions and benefits paid out of the net income of the government, and the reduction of prices in public eating, the incomes of workers and office workers will increase by an average of 40% per worker. The real incomes of the collective farmers will also rise by not less than 40%.

The seven-year plan envisages a more rapid rise in labor productivity than in wages. As a result, the net income of enterprises will rise more rapidly than other forms of primary incomes, and this will create real conditions for increasing the role of profit in the expansion of the business activity of the enterprises, and in material stimulus to the collectives of personnel. Our press has already printed suggestions with regard to the desirability of increasing the portion of profit permitted to remain at the disposal of the enterprises for expanding their activities and for increasing the fund for rewards to members of their staffs for increasing the volume of production, reducing its cost, speeding the turnover of funds made available to the enterprise, etc. During the current seven-year plan, favorable conditions exist for the carrying out of these measures.

The ratio between the accumulation and consumption funds established for 1959-1965 will provide successful fulfillment of the major objectives of the seven-year plan — a further powerful upsurge of all branches of the socialist economy on the basis of priority growth of heavy industry, strengthening of the economic potential of the country, and further substantial increase in the living standard of the people.

The accumulation fund will rise by approximately 68% during the seven-year plan, and there will be a slight rise of its proportion in the national budget. This change in the relationship between the consumption and accumulation funds is determined by the existing level of development of the national economy of the country and the magnificent objectives in the construction of the material and technological basis for communism. This small increase in the share of the fund of accumulation in the national income does not mean an infringement upon public consumption at all. The high rate of growth in the national income will make possible an increase in the absolute magnitude of the consumption fund. During the present seven-year plan, this fund will rise annually by not less than 6.9-7.25%.

At the same time, it must be borne in mind, that the division of the national income into funds of accumulation and consumption we have employed, does not provide a complete characterization of the true distribution of the newly-created value for the purpose of expansion of production and consumption. The point is that a very significant share in the composition of the fund for accumulation is that of capital investment in housing and the building of cultural and service institutions, the direct purpose of which is to satisfy the needs of the population as consumers. From 1959-1965, capital investments in housing will be almost 1/5 of the entire volume of capital investments in the national economy. If the distribution of the national economy of the USSR be examined with due allowance for expenditures upon housing and cultural and service construction, it will appear that a substantially greater proportion of the resources goes to consumer uses than is reflected by the accepted system of calculating the consumption fund.

The increase in the volume of the consumption fund during the present seven-year plan will make it possible to carry out a vast program of construction and to make a decisive step in the direction of creating the foundation for communism in material technology.

From 1959 to 1965, capital investments by the government will come to 1,940-1,970 billion rubles. This sum is 80% greater than the investments during the preceding seven years, and virtually equal to the capital investments in the national economy during all the years that the Soviet system has existed. In addition, the collective farms will make substantial capital investments. According to preliminary data, the collective farms will, as a result of growth of production in agriculture and livestock, be able to direct 345 billion rubles toward capital investment.

As is evident from the table presented on the following page, the capital investments planned for the seven-year plan differ from those during the prior seven years not only in size but in structure. There will be a change in the distribution thereof among the productive and non-productive spheres and among the various branches of the national economy.

As compared with the preceding seven-year plan, there will be some increase in the share of capital investments going to branches in the non-productive sphere, primarily housing. From 1959-1965, 650-660 million square meters of housing space will be completed. This is greater than the entire urban housing space built during the years of Soviet power.

Proceeding from the basic problem of the seven-year plan, that of gaining maximum time in the peaceful economic competition with capitalism, the maximum increase in capital investments is envisaged for heavy industry, primarily for the iron and steel industry, the chemical industry, the oil and gas industry, and in the manufacture of machinery. All told, nearly 700 billion rubles will be invested in heavy industry. Within this framework, the iron and steel industry, the oil and gas industry will show a 30% increase in capital investments over the preceding seven-year period, and the chemical industry a 180% increase. This trend in capital investment will assure attainment of the projected high rates of development of the entire national economy, a serious improvement in its structure branch by branch, and an upsurge in the technological level of material production.

In 1959-1965, the production of pig iron, steel, and gas will grow more rapidly than in the preceding seven-year plan, as will such consumer goods as fabrics, sugar and meat, while the rise in absolute growth of these types of production will be significantly more important. The most

	1959-1965 (Billion Rubles)	As % of 1952-1958
Total Capital Investments in Economy	1,940-1,970	181-184
Including:		
For Productive Projects	1,485-1,510	181-184
Including:		
Iron and Steel Industry	100	2.4 Times
Chemical Industry	100-105	No data
Oil and Gas Industry	170-173	2.3-2.4 Times
Coal Industry	75-78	122-127
Power Plants, Power and Steam Lines	125-129	70%
Lumber, Paper and Wood-Working Industry	58-60	100%
Light and Foodstuffs Industry	80-85	Over 100%
Railway Transportation	110-115	185-194
Construction Industry	110-112	179-182
Housing and Civic Construction	375-380	180-183
Construction of Educational, Cultural and Public Health Structures	80	174

rapid rates, exceeding the average rates of growth of industry as a whole, will be displayed by the oil and gas industry, the electric power industry, the manufacture of machinery and the working of metals, the production of cement, and such important items in the diet as sugar and meat. The average annual increase in the production of pig iron was two and one half million tons in 1952-1958, while during the current seven-year plan it will be 3.6-4.4 million tons, while that of steel, which was 3.4 million tons, will be 4.4-5.1 million tons, etc. In 1965, the Soviet Union will reach first place in production of industrial goods per head of population in Europe. In the production of some most important types of products, our country will pass the present level of industrial production in the United States, while in other fields it will approach that level.

The major objectives in the further change in the structure of material production posed during the seven-year plan are possible thanks to the planned development of our national economy, and the elimination of the exceedingly distorted structure of production in pre-Revolutionary Russia, plus the creation of a powerful and harmoniously developed socialist economy. The time is past when it was necessary for us, in the course of economic upbuilding, to correct the glaring disproportions in the national economy inherited from Czarist Russia. Today we are able to develop our national economy at high rates, directing an ever increasing mass of material, labor and financial resources to an uplift in the most important branches of production, to accelerating technical progress in the entire economy, and that is to make use of capital investments in a manner offering maximum efficiency.

Increase in circulating funds in production is ascribed much importance in the seven-year plan. Satisfaction of the requirements of the national economy in circulating funds is determined chiefly by the level of production of metal, chemical products, building materials, fuel, electrical energy and a number of other products, as well as by the development of agriculture. We know that until most recently we experienced a shortage of power resources, of certain types of metal, and of a number of other products. This could not but have a negative effect upon the development of production as a whole. Therefore, the seven-year plan envisaged a substantial expansion of production of these products. The increase in circulating funds is also due to the fact that technical progress in all branches of the national economy, the large-scale introduction of high output machinery, equipment and machine tools, the construction of a large number of automatic lines and shops have significantly changed the ratio between fixed and circulating capital. The new and more highly productive instruments of labor will make it possible to process a larg er number of objects of labor in a given period of time. At the same time, the cost of machines is rising at consid erably less rapid rates than their output capacities. An analogous effect is produced by modernization of the exist ing equipment, and the introduction of a more progressive organization and technology of production. Suffice it to sa that the large scale introduction of oxygen blow into metal lurgy envisaged during the seven-year plan will make it possible to produce an extra 3 million tons of pig iron and 8 million tons of steel during the seven years. Although technological progress does carry with it a reduction in th expenditure of objects of labor per unit of production as a result of more economical and rational utilization thereof (causing somewhat of a reduction in the need for circulating capital) it nevertheless creates a need for more rapid growth in circulating capital as compared with fixed capit In the seven-year plan this finds expression in acceleration of the rate of development of the fundamental branche of industry producing objects of labor, in rapid increase i the power producing industries, and in the further upsurg of agriculture. This will assure not only rhythmical func tioning of enterprises and an increase in production but al so the possibility of forming necessary reserves.

During the current seven-year period, capital investments will be employed along two major lines: for the construction of new enterprises and for the reconstructio expansion and technological re-equipment of existing ente prises.

The construction of new enterprises will be realized pr marily in such fields as production of petroleum, gas, ele trical energy output, production of raw materials, etc., while more than 40% of the total capital investment is to g to the eastern districts of the country. Here it is planned to build the third iron and steel center of the USSR, a pow erful supply of energy employing cheap coals and the

energy of the rivers of Siberia. Broad utilization of the natural resources of the eastern districts, rich in content and profitable in their conditions of exploitation, will make it possible to attain substantial economies in capital investments and thus to produce items the cost of which will be substantially less than in other districts of the country. Thus, for example, utilization of the cheap coals of the Kansko' Achinskiy coal basin for production of electrical energy will yield power costing 1.06-1.39 kopeks per kilowatt hour, or even less than at a number of hydroelectric plants in the European portion of the USSR. Unit capital investment for construction of hydroelectric plants in the eastern districts, and the cost of production of hydroelectric energy, will be only 1/3 to 1/4 of that in the western districts of the country.

The expansion and reconstruction of the existing enterprises will occur chiefly in branches of the processing industries, and also in a number of other fields. It is planned to undertake technological re-equipment of many enterprises, to be based on all-round mechanization, automation and the introduction of new production processes, as well as large-scale replacement and modernization of equipment. This will result in substantial growth in their productive capacities and in the productivity of labor, and this will permit a substantial increase in output in comparatively short periods. At the same time, the existing buildings and structures, power installations, railway sidings, etc. will be more fully employed. Further, the need for expenditures upon shifting and training labor and upon additional housing and cultural and service construction will disappear. As a result, the volume of capital investments per unit increase in production at the enterprises to be reconstructed will, as a rule, be less than the unit capital investments at enterprises to be built from scratch. Calculations show that all-round mechanization and automation of the Magnitogorsk, Kuznetsk and Nizhny Tagil Combines, and of the Dzerzhinsky plants will increase pig iron production by 880,000 tons per year, corresponding to the output capacity of one and one half new blast furnaces. The production of steel will rise by 1,150,000 tons, which is equal to the capacity of three new open-hearth furnaces. The production of rolled steel will rise by 9,300,000 tons (the output capacity of one rolling mill).

The trends in capital investment in railway transportation will undergo a significant change. While all capital investments in the development of railway transportation will increase by 85-94%, as compared with the preceding seven-year period, investments in electrification of railways will increase 170%. The introduction of electric and diesel engines will make possible a significant increase in the carrying capacity of the railroads, a stabilization of the functioning of the lines, and acceleration of the delivery of freight, and of the turnover of funds in the national economy, with an economy of approximately 400 million tons of coal and 45 billion rubles in operating expenses during the seven years.

The grandiose program of capital construction envisaged in the seven-year plan can be fulfilled and over-fulfilled successfully on condition that government funds be utilized most efficiently and thriftily. The resolutions of the 21st Congress of the Communist Party of the Soviet Union emphasized the need for maximum economy of funds both in the building of industrial projects, and in construction for housing and cultural and service purposes. Of primary importance is an economically rational distribution of enterprises among the various districts of the country, and a practical specialization and integration of enterprises. The 21st Congress of the Party directed its attention to the impermissability of dissipation of capital investments among large numbers of projects in individual sites. A major economy in capital investments may be attained by building technologically more modern enterprises, and by converting the existing factories and mills to the most modern technology of production, etc. An increase in the efficiency of capital investments by all possible means will make possible a maximum rise in productive capacities, an increase in the productivity of social labor, an acceleration in the rates of economic development of the country, and an upsurge in the living standard of the people, at minimum expenditure of funds.

The national income is the main source of increase in public consumption, and of all-round rise in the living standard of the people. The consumption fund, which in recent years has been approximately three quarters of the national income of the USSR, will rise by 60-63% during the seven year period.

In capitalist countries, a considerable portion of the national income is acquired by the exploiting classes without compensation and serves as the source for their parasitic consumption. Thus, consumption by workers, office workers, and working farmers, in the USA in 1954 was 66.4% of total consumption. Thus, the exploiting classes, which constitute an insignificant portion of the population, acquire not less than one third of the consumer funds in the USA.

In the USSR, the entire consumption fund belongs to the working people, and acts as a fund for truly popular consumption. In socialist society, the consumption fund consists of two parts: the fund for individual consumption and the fund for social consumption. The first part enters personal consumption on the part of the working people in accordance with the quantity of labor expended by them in social production. Under today's conditions, this is the basic portion of the consumption fund.

The current seven-year plan envisages further increase in the average wage of workers and office workers, and the repeal, in the years immediately ahead, of taxes on the population. This will be accompanied by a particularly pronounced increase in the wages of the low-paid workers and office workers: the minimum rising from 270-350 rubles to 500-600 rubles during the seven-year period, or 70-80%. Workers and office workers in the medium paid brackets will also benefit from a specific increase in wage rates and scales. This will bring order into the wage system and reduce the spread between the payment for the labor of the low and medium paid groups of workers and the high-paid groups. As already noted, the real incomes of workers and office workers, with consideration for pensions and benefits, and of price reductions in public eating places, will rise by an average of 40% per worker during the seven years. The real incomes of collective farmers will rise by approximately the same amount.

The second portion of the consumption fund is distributed among the working people free of charge, regardless of the quantity and quality of work they give to society. This portion of the consumption fund yields payments of pensions and benefits, covers free education and medical aid, and many other social and cultural measures. In recent years, the expenditures of the government upon pension payments have undergone a particularly pronounced increase. In 1958 alone, the people received from the state pensions to a total of 64 billion rubles, which is almost double the total volume of pensions paid to the population in 1955, and is nearly 150% greater than in 1953. At the beginning of 1958, nearly 18 million persons in the country were receiving pension payments.

In capitalist countries, expenditures upon payments of pensions fall to a considerable degree upon the shoulders of the working class. Thus, for example, in the United States, at the present time workers and office workers have a 2.25% deduction made from their salaries, which represents 50% of the pension fund. In England, the contributions of workers and office workers to pension funds exceed the contributions of the entrepreneurs. Moreover the age at which one gets old-age pensions in the capitalist countries is considerably higher than in the USSR. In the USA pension age is 65 for men and 62 for women while in the USSR it is 60 for men and 55 for women. Moreover, workers and office workers engaged underground or in branches of production with harmful conditions of labor, as well as women who have borne five or more children and raised them to the age of eight, are pensioned earlier. The socialist state takes upon itself the bulk of the expenditures for the upbringing of the rising generation. There are five million children in kindergartens, day nurseries, and often homes. 5,600,000 children vacation in pioneer camps, at summer day centers at the schools, and at tourist campsites each year.

Our country provides free education at all levels. Students of the higher and secondary educational institutions are provided with stipends. More than three million working people rest and take cures at rest homes and sanatoria each year. The expenditures of the government in further improvement of the health protection of our country's population will be nearly 360 billion rubles in the seven years. Also to be taken into consideration is the fact that about 7 million single mothers and mothers of many children are receiving assistance from the government. The seven-year plan envisages a considerable increase in these expenditures by the government.

Characteristic of the dynamics of the individual consumption fund and of the social consumption fund is the more rapid growth of the latter. Its share in the total will constantly increase, and this is an important prerequisite for gradual transition to the communist principle of distribution. Whereas, in 1958, the government's expenditures upon free education, medical services, boarding schools, kindergartens, day nurseries, sanatoria, rest homes and other payments and benefits was in excess of 215 billion rubles, in 1965 these will attain approximately 360 billion rubles, or about 3,800 rubles per working person per year. Moreover, more than 800 rubles per working person will be expended per year upon construction of housing, schools, cultural, service and medical institutions.

Soviet trade is the main force in which satisfaction of the individual needs of the working people is carried out. The consumption of industrial and food commodities acquired by the population in the system of trading institutions represents about 70% of the consumption fund in our country. Under these conditions, more than 90% of the total commodity turnover represents government and cooperative trade.

In connection with the increase in industrial and agricultural production, and the incomes of the population, the retail turnover of government and cooperative trade will rise approximately 62% (in comparable prices) from 1959 to 1965. The rise in physical volume of retail trade will be 70% greater than during the past seven years.

In 1959-1965, there will be a significant improvement in the structure of retail trade turnover, and thereby in public consumption. The sale of valuable and high-quality goods will rise more rapidly than will commerce as a whole. Thus, the sale to the population of livestock products during the seven-year period will rise by 120%, that of vegetable fats by 90%, that of fruits and citrus products by 200%. The production of sugar, and the sale thereof to the population, will rise sharply. There will be a significant expansion in the sale of the most important industrial products: fabrics, clothing, underclothing, footwear, furniture, etc. Sale to the population of commodities to ease women's household work will increase even more rapidly: washing machines, electrical floor polishers, vacuum cleaners, electrical irons, refrigerators. In comparison with the preceding seven-year period, the sale of refrigerators to the population will rise 480%, that of washing machines and implements by 810%, that of sewing machines by 110%, that of television sets by 360%, that of radio receiving sets by 80%, and that of motorcycles and scooters by 170%.

The seven-year plan envisages a more rapid increase in commerce in the villages, and this will result in a further narrowing of the gap between the level and structure of consumption of the working people of town and village.

An important role in improving popular consumption is played by the expansion of the network of public eating enterprises envisaged by the seven-year plan, improvement in their work, and reduction in the price of meals. Production of public eating enterprises will more than double. Preparation of meals to be taken home will become widespread. The majority of working people, office workers, and students will be covered by public feeding facilities. The sharp increase in output of the catering industry with reduction of prices therein, will have a favorable effect upon the budgets of the population, particularly those of working families, and will ease the labor of millions of women. The population will benefit by a considerable saving. At the most modest estimates, merely a one percent reduction in prices for the products of public feeding enterprises would give the population a gain of one and one half billion rubles in 1965.

The major source for satisfying the collective farmers' foodstuffs requirements during the upcoming seven-year plan will be the commonly-held portion of the economies of the collective farms. The personal plots of the collective farmers, as well as workers' and office workers' gardens, will continue to be of definite significance. However, the collective farmers', workers' and office workers' needs for milk, butter, vegetables and other products will be satisfied to an ever-increasing degree not from their personal, rather inefficient gardens, but from the production of collective and state farms.

The increase in the output of industrial and food commodities, and in their sale to the population, planned for the seven-year period, will permit considerable progress along the road to complete satisfaction of the constantly rising material and cultural demands of Soviet people. At the end of the seven-year plan, the Soviet Union will approximate the level of the USA, both in total volume of production of fabrics, clothing, shoes, and also in the production thereof per head of population. Our country will catch up with and surpass the most developed capitalist countries in the level of production of a number of the most important foodstuffs as well.

The measures for advancement of the national economy of the USSR from 1959 to 1965 outlined by the Communist Party will assure high rates of increase in national income: the foundation for growth in the power of our country and for increasing the living standard of the working people.

Speaking at a meeting of working people in Ryazan, on February 12, 1959, Comrade N. S. Krushchev emphasized that the seven-year plan is based upon concrete calculation

(Continued on Page 88)

I. Dudinsky

The Seven-Year Plan and the Development of the World System of Socialism

The decisive feature of the present stage in the history of mankind is the economic competition between two world systems, that is, the socialist and the capitalist. The historic problem facing the world system of socialism consists primarily in utilizing the advantages of the new social system on a world scale, and thus assuring the socialist states' economic triumph over capitalism in the shortest possible historical period. The tremendous achievements of the Soviet Union and the other socialist countries have provided them the possibility of advancing to the nearest future the objective of overtaking and surpassing the most advanced capitalist countries in the economic sense.

For a long time, the Soviet Union was the world's only socialist country; it existed under conditions of hostile capitalist encirclement, and consequently could not regard itself as fully guaranteed against the danger of forcible restoration of capitalism by the forces of international reaction. With the formation of a powerful socialist camp, its position in the world has undergone a fundamental change. Capitalist encirclement of our country no longer exists. Two world social systems appear on the international arena: capitalism, which is outliving its day, and socialism, which is bursting with the growing forces of life. Comrade N. S. Krushchev noted in his speech at the 21st Congress of the Communist Party of the Soviet Union, "Today there no longer exist forces in the world capable of restoring capitalism in our country, or of destroying the socialist camp. The danger of restoration of capitalism in the Soviet Union has been eliminated. This means that socialism has won not only completely, but for all time." This profound political and theoretical conclusion, significant in a programmatic sense, testifies to the gigantic increase in the forces of world socialism, and the unity of the basic interests of all the socialist states, as well as the need constantly to strengthen the friendship and cooperation of these brotherly countries.

"The seven-year plan for the development of the national economy of the USSR, a plan for the all-out upbuilding of a communist society in our country, constitutes a major contribution by the Soviet people to the common cause of all socialist countries.

"The international significance of the seven-year plan lies in the fact that its fulfillment will mean a further strengthening of the power of the world system of socialism." This is stated in the target figures for development of the national economy of the USSR from 1959 to 1965, approved by the historic 21st Congress of the Communist Party of the Soviet Union.

The seven-year plan of the USSR, which is a most important portion of the long-range plan for the development of the national economy of the Soviet Union during the coming fifteen years, expresses more completely and clearly than any of its predecessors, the organic ties between communist construction and the building of socialism in the fraternal countries. This magnificent plan is a new proof of the fulfillment by the Soviet people of its international duty to the working people of all countries, to the international communist and working class movement, and to all progressive humanity.

The seven-year plan for the development of the national economy of the USSR will deal a crushing blow to international reformism and revisionism, to the efforts of the revisionists to split the socialist countries, and to sow lack of confidence in the forces of the new social order among the working people.

The decisive advantages of the socialist system — social ownership of the means of production, planned administration of the economy, absence of depressions and recessions, powerful stimuli and creative initiative on the part of the broad masses of the working people — all this finds concrete expression in the high rates of economic development of the socialist countries, creates room for rapid development of the forces of production with the object of a constant rise in the well-being of the peoples. An enormous role in accelerating the rates of economic development is played by brotherly cooperative and mutual assistance on the part of the socialist states. The Communist and Workers' Parties of the socialist camp, who are building their economic policy in accordance with the demands of the objective economic laws of socialism, are correctly coordinating the problems of improving the economies of their countries and the interests of the further strengthening of the world system of socialism as a whole. The working people of the Soviet Union and of the countries of peoples' democracy are attaining ever-greater successes in the upbuilding of socialism and communism, and in the peaceful competition with capitalism.

High rates of economic development are a general principle of socialism, today confirmed in the experience of all the countries of the socialist camp. Industrial production in our country has more than doubled during the years of Soviet power, every decade. Yet, the United States required thirty years to double industrial production over the 1913 level, England almost forty years to attain a 50% increase in the level of production as of 1913.

From 1950 to 1958, the Chinese Peoples' Republic increased its industrial production approximately ten-fold, and in 1958 by 65% over 1957. In the Korean Peoples' Democratic Republic, industrial production in 1958 was four times as high as in the pre-war year of 1949.

Industry is also developing rapidly in the European countries of peoples' democracy.

In the post-war period, the rates of growth of industrial production in the socialist countries as a whole have been approximately 150% higher than in the capitalist countries, as borne witness to by the following data.

	1950	1951	1952	1953	1954	1955	1956	1957
Socialist Countries	190	226	259	295	332	369	410	445
Capitalist Countries	142	154	158	169	169	187	195	211

In 1958, the lands of socialism increased the output of industry five-fold over the 1937 level. During the same period, the capitalist states were incapable even of doubling the volume of industrial production.

In the past five years, (1954-1958) the average annual increase in industrial production in the socialist camp as a whole was 11%, while it was less than 3% in the entire capitalist world.

There was a time when capitalist economists, striving to denigrate the attainments of the socialist camp, attempted to demonstrate that high rates of development of industry there represented the results of a low absolute level of development of industrial production in the majority of these countries in the past. The "prophecy" was the inevitability of a "damping out" of the rates of industrial development in the USSR and the other socialist countries. This was an anti-scientific effort to judge socialism by analogy to the economics of capitalism. It is therefore not surprising that life has completely refuted these cooked-up theories. In the Soviet Union, even after it became a leading industrial power on a world scale, industrial production continues to rise at more than three times the rate of the United States. Or, take another example, Czechoslovakia. In capitalist Czechoslovakia, which was an industrially advanced country, the increase in industrial production in the period between the First and Second World Wars was no more than 1-2% per year. Under the conditions of socialism, during the past five years, the average annual increase in volume of industrial production in that country attained 9.2%, and in 1958 it rose 11.3% over 1957.

The socialist system has demonstrated its complete superiority over the capitalist system in the rates of development of production, and today has entered with confidence upon a new and decisive stage in the economic competition with capitalism. Today, the problem consists of achieving superiority of the socialist system over the capitalist in production on the world scale, that of surpassing the most advanced capitalist countries in the productivity of social labor, and in the production of goods per head of population, and that of providing the world's highest living standard.

Thanks to the high rates of economic development, the Soviet Union had already attained second place in the world in industrial production even before World War Two, but continued to lag significantly behind the United States in the absolute volume of production, and in the output of goods per head of population, and to lag behind the West European capitalist countries in output per head of population. Despite the fact that the rates of growth of industry in the USSR have, over a long period of years, significantly exceeded the rates of growth of American industry, our country lagged behind the United States in the absolute quantity of growth of production of pig iron, steel, oil, iron ore, and the output of the machinery-producing industries. In recent years, the USSR has overtaken the USA not only in rates of growth, but in absolute average annual volume of growth of production, particularly in the fields of iron ore, pig iron, steel, petroleum, coal, cement, sulfuric acid, cotton and woolen textiles, and leather footwear. From 1953 to 1957, the absolute average annual increase in pig iron smelting was 2,400,000 tons in the USSR and 800,000 tons in the USA, the corresponding figures for steel being 3,200,000 and 300,000, in cement 3,200,000 and 1,200,000, in petroleum 11,400,000 and 8,800,000. The output of woolen fabrics increased during the same period an average of 18.4 million meters in the Soviet Union, while in the United States it declined by 9.8 million meters per year.

The Soviet Union has advanced substantially in solution of its fundamental economic task. In 1958, the industrial production of the USSR substantially exceeded the industrial production of France, England and Western Germany combined. The spread between the USSR and the USA was substantially reduced in output of iron ore, production of iron and steel, of a number of types of machinery, tools, and cotton textiles. In a number of important types of industrial and agricultural production, such, for example, as output of coal, production of woolens, of the lumber industry and of sawmill products, of butter, in the wheat crop, the sugar and potato crops, the Soviet Union surpassed the level of the United States of America.

The resolutions of the 21st Congress of the Communist Party of the Soviet Union note that, as a result of fulfillment of the plan, the Soviet Union will surpass the present level of industrial production in the USA in absolute output of certain major types of production, and in certain others will approximate the American level. At that date, the production of the most important agricultural products as a whole, and per head of population, will exceed the present level of the USA. The superiority of the USSR in rates of growth of production will create a real foundation for the fact that in approximately five years subsequent to 1965, the level of production of the USA per head of population will be attained and surpassed. Thus, at that time, and perhaps earlier, the Soviet Union will emerge in first place in the world both in absolute level of production and in output per head of population, and this will assure the world's highest living standard to the population. This will be a world-historic triumph of socialism in its peaceful competition with capitalism.

The peoples of the socialist camp will find ever-new resources for rapid rates of increase of production and increase in the well-being of the working people. The question of gaining as much time as possible in the economic competition with capitalism is one that today is faced not only by the Soviet Union. The 600 millions of the Chinese people are conducting a successful competition with capitalism. In 1957, the Communist Party of China placed before the working people of the Chinese Peoples' Republic the objective of surpassing so advanced a capitalist country as England, within the next 15 years. However, it is clear already that this objective will be met significantly prior to the date set. In 1958, England produced about 20 million tons of steel. However, China is fighting to raise the smelting of steel to approximately 18 million tons in 1959.

As a result of socialist industralization, People's Poland has already significantly exceeded certain average world figures in production. In 1957, steel production in Poland reached 187 kg as against 105 kg, which is the world's average. In electrical power production the figures are, respectively, 748 and 640 kwh; in fuel (recalculated as mineral coal) the figures are 3428 kg as against 1404; in cement 159 as against 88 kg; in cotton and woolen fabrics, and in synthetic staple fiber 8.4 as against 4.4 kg.

Czechoslovakia is today on a par with the most economically advanced West European capitalist countries in production of machine tools and forging and press equipment, and is ahead of them in production of hydraulic and steam turbines. In the production of power and the melting of steel per head of population, Czechoslovakia has surpassed Italy and France.

A number of other lands of peoples' democracy have also attained major triumphs in the economic competition with the capitalist countries.

The socialist world has overtaken the capitalist world in many, most important fields of science and technology. The Soviet Union enjoys priority in the utilization of atomic energy and cosmic space for peaceful purposes. The

socialist countries have overtaken the capitalist states in the field of training scientific and engineering personnel.

A central condition for successful economic competition of socialism with capitalism is the continuous increase of labor productivity in the lands of the world socialist system. The Soviet Union, and, following thereon, other socialist countries, will, in the not distant future, overtake and surpass the most advanced country in the capitalist world, the United States of America, in the field of labor productivity. Increase in labor productivity will be attained by extensive introduction of the latest achievements of science and technology, of modern means of all-round mechanization and automation of production processes, by better organization of production, etc. The ever-increasing communist consciousness of the working people will play an important role in increasing the productivity of labor. In the Soviet Union, increase in labor productivity will represent three fourths of the increase in industrial production by 1965.

One of the sharpest manifestations of the successful progress of mankind towards socialism and communism is the continuous increase in the share of the world socialist system in world industrial production as a whole. In 1917, the proportion of industrial production by our country in world industrial production was less than 3%, while in 1937 it was about 10%. In 1958, the share of USSR industrial production in world industrial production was already almost 20%, and the share of all the lands of socialism taken as a whole was one third. If we consider that the population of the socialist countries is one third of the population of the world, it follows that the world system of socialism as a whole has already caught up with the world capitalist system in industrial production per head of population.

The countries of the socialist camp are offering to compete with the capitalist world in the field of peaceful economics, and not in an arms race. This is in accordance with the interests of all mankind, which needs neither "hot" nor "cold" war, and for which peace is the highest good. The peoples of socialist countries do not spare their strength in their efforts to emerge as victors in this historic competition.

The peaceful appeal of the lands of socialism has brought the ruling circles of the capitalist countries to confusion. "The Western world," writes the French paper Le Monde, "understands the true nature of the challenge thrown down by the socialist countries. Unfortunately, the Western world is not yet capable of accepting the challenge." In extensive commentaries in the capitalist press of the United States, England, France and other imperialist countries, a poorly-concealed fear of the Soviet seven-year plan emerges. The majority of the newspapers and magazines of the capitalist countries regard the objectives of this plan to be entirely realizable and recognize that the capitalist world is not capable either economically or ideologically of standing up to the grandiose growth in the forces of the world socialist system.

The apologists of imperialism have disseminated the myth of the high living standard of the population in the countries of the "Western world" for more decades than one. Juggling with average figures of production per head of population in the most advanced capitalist countries, they are trying, by all possible means, to demonstrate that the lands of socialism cannot overtake and surpass the "Western world" in the economic sense,and, consequently, cannot provide a higher living standard for the population. In so doing, the ideologists of imperialism keep silent over the fact that the riches of the USA, England, and other imperialist powers, have been built on the blood of the peoples of the colonial and dependent countries, and that the lion's share of the values produced in the capitalist countries falls into the hands of the ruling classes, which constitute a small portion of the population of these countries.

The seven-year plan will knock this last ace out of the hands of the apologists of imperialism. In the not-distant future, the production of consumer goods per head of population in the USSR and other socialist countries will be greater than in the most advanced capitalist countries. The growing forces of peace and socialism are unconquerable. Their triumph over the forces of the old world is inevitable.

At the dawn of the existence of the world's first socialist state, V. I. Lenin wrote, "...if Russia is covered with a network of electric power stations and powerful engineering equipment, our communist economic upbuilding will become an example for the future socialist Europe and Asia."*

Today a significant portion of Europe, and the larger portion of Asia have already become socialist. The Soviet Union has been transformed into a powerful socialist state. During the five-year plans, tens of thousands of factories, plants, and electric power stations have been created in our country. The upbuilding of communism in the USSR serves as an active example for the peoples of the other countries of socialism, and also for the working people of all countries.

The working people of great China, Poland, Czechoslovakia and other countries of peoples' democracy in Asia and Europe regard the seven-year plan for the development of the national economy of the USSR as their own cause. They see, in that plan, the guarantee of new triumphs in the upbuilding of socialism in their countries, and the guarantee of final victory of the cause of peace and socialism. The magnificent program of communist upbuilding laid out by the Communist Party of the Soviet Union inspires the working people of the countries of peoples' democracy to new triumphs of labor. "It may be said with full confidence," wrote the newspaper Jenminjibao, the organ of the Central Committee of the Chinese Communist Party, "that the seven-year plan will reinforce the strength not only of the Soviet Union but the strength of the entire camp of socialism, of all peace-loving peoples of the globe."

As a result of socialist industrialization in the majority of the countries of peoples' democracy, industry has become the dominant factor in the national economy: Poland, Hungary, Rumania, and Bulgaria have been transformed to industrial and agrarian countries with highly-developed heavy industry. The Chinese Peoples' Republic is rapidly undergoing transformation from an agrarian to an industrial and agrarian country.

The lands of peoples' democracy are successfully resolving the most difficult problem of the upbuilding of socialism — that of converting the peasantry to a cooperative path of development. Agriculture has been rendered cooperative in the Chinese Peoples' Republic, Bulgaria, and the Korean Peoples' Democratic Republic. The process of socialist reorganization of agriculture is nearing completion in the republic of Czechoslovakia and the Peoples' Republic of Albania. In the Rumanian Peoples' Republic, the socialist sector in agriculture is today about 50% both in acreage and in number of households. In the German Democratic Republic, approximately half the land area is now concentrated in cooperatives and government-owned enterprises. Cooperation is flourishing ever more widely in the other countries of socialism as well.

* V. I. Lenin, Collected Works (Russian edition), Volume 31, p. 486.

In the report by Comrade N. S. Khrushchev, at the 21st Congress of the Communist Party of the Soviet Union, a concrete and developed program, paths and methods of the upbuilding of communism were sketched out. The content of that truly enormous leap that society must make in order to achieve the transition to communism was clearly marked out. Therefore, this report is a major contribution to the treasury of Marxism-Leninism, and opens before the fraternal socialist countries a clear perspective for the further upbuilding of a new socialist order, and thereby significantly facilitates their transition to communism. In the report by Comrade N. S. Khrushchev, a rationale is found for a most important theoretical conclusion: the lands of socialism, successfully utilizing the possibilities inherent in the socialist system, will undergo conversion to the higher phase of communist society more or less simultaneously.

Under the conditions of capitalism, particularly during the epoch of imperialism, we know that the law of unequal economic and political development of the various countries is operative. A bitter battle proceeds for redivision of the world; certain countries occupy and exploit others. In the world socialist system, where the law of planned, proportional development of the national economy holds, and brotherly socialist mutual assistance is practiced among countries forever liberated from capitalist slavery, lands that were in the past economically backward, resting upon the experience and the all-round support of other socialist countries, rapidly raise the levels of their economies and cultures, and this defines the possibility for equalizing the general line of development of all the socialist states. Thus, these states will create the prerequisites for transition from the first phase of communism to rise at more rapid rates. In the light of the profoundly internationalist, Marxist-Leninist concept, of equalization of the general line of economic and cultural development of the socialist countries, accompanied by mutual brotherly assistance, the slanderous essence of the anti-Marxist, revisionist concepts of the allegedly inevitable unevenness in the development of socialist countries, too, and similar inventions, become clear.

The attainment of the great common goal will be furthered by the long-range plans for further growth of the productive forces outlined in the fraternal socialist countries, and for increase in the well-being and cultural level of the working people of town and city on the basis thereof.

The Communist Party of China has posed a grandiose objective before the working people of the Chinese People's Republic — to convert a country that in the recent past was incredibly backward into a powerful socialist state with modern industry, modern agriculture, modern science and culture. The basic task of the technological revolution proceeding to develop the entire country lies in erecting a new technological basis beneath the entire economy. In practice, this means that in the next 15 to 20 years, China will have to create a unified industrial system, that is, an industry capable of producing every possible type of machine and equipment needed by the national economy. In various parts of China, construction of many hundreds of the very largest industrial projects is under way, particularly enterprises in the iron and steel industry, and for the production of machinery. A considerable portion of these are being erected with the assistance of Soviet specialists, and are being equipped with Soviet equipment. At the same time, hundreds of thousands of medium sized and small enterprises are being built in the Chinese Peoples' Republic. The country's agriculture is progressing at unprecedented rates.

The Third Congress of the Polish United Workers' Party has confirmed the directives for the development of the Polish economy in 1959-1965. The directives envisage an increase of 80% in the industrial production and of 30% in the agricultural production in 1965 over 1958. The planned increase in production will be carried out on the basis of the technological reconstruction of all branches of the national economy and will make it possible to assure a substantial increase in consumption. Peoples' Poland will become an economically-developed country.

In the German Democratic Republic, the 6th Congress of the Socialist Unity Party of Germany has advanced as the major economic task that of attaining, in a very few years, such a development of the national economy as would clearly demonstrate the superiority of the socialist order of the German Democratic Republic over the dominance of the forces of imperialism in the Bonn state, and that as a result, the level of consumption per head of working population in all the most important foodstuffs and consumer goods attain and surpass the level of consumption per head of population in all of Western Germany. It is planned to solve this problem in the next three years. The industrial development of the German Democratic Republic will progress along the lines of further improvement in the machinery manufacturing, the chemical, the iron and steel, and the mining industries and the expansion of the coal mining basis for production of energy.

The seven-year plan of the German Democratic Republic envisages an 80% increase in industrial production from 1959 to 1965. The fifth Congress of the Socialist Unity Party of Germany called upon the population of the republic to successfully complete the upbuilding of socialism. The seven-year plan of the German Democratic Republic contains target figures defining the road to be followed in achieving its objective.

The historic objective of completing the construction of socialism in Czechoslovakia in the years immediately ahead was advanced by the 11th Congress of the Czechoslovak Communist Party. The Congress noted that, industrial production in the country must increase by 90-95% from 1957 to 1965. In the future as well, the manufacture of machinery will be the most important element in the economic development of the Czechoslovak republic. Much attention is given to raising production in the fuel, the iron and steel and the chemical branches of industry. In 1965, the overal mining of coal will attain 112-113 million tons, that of electrical energy 38 million kwh, that of steel 9.2-9.7 million tons, that of coke 10.7 million tons, that of artificial staple fiber 90-95 thousand tons, that of cement 7 million tons. Agricultural production in Czechoslovakia will rise by approximately 40% from 1957 to 1965. During the same period, the personal consumption on the part of the population will increase by approximately 45%. As a result of the doubling of industrial production by 1965 over 1957, Czechoslovakia will overtake such highly developed industrial countries as England and West Germany in production per head of population, and the United States in the majority of the most important branches.

In Bulgaria, Hungary, Rumania, Albania, the Korean Peoples' Democratic Republic, and other fraternal socialist countries, important objectives have also been advanced in the field of further upbuilding and reinforcement of the new social system.

The seven-year plan of the USSR, and the long-range national economic plans of the lands of peoples' democracy bear witness to the fact that the task of overtaking and surpassing the capitalist countries in the economic sense has become one faced not only by the Soviet Union. All the countries of the world system of socialism have attained

the level of dealing with this task to a greater or lesser degree. A guarantee of its successful solution is the fact that the economies of the socialist countries, thanks to the unassailable advantages of the new social order, will continue, in the future, to advance at a tempestuous rate unattainable by capitalism, and that the world socialist system will continue in the future to progress along lines of steep advance. The reality of the further mighty growth of the economies of the socialist countries is the reality of their national economic plans, tested in life.

The seven-year plan of the Soviet Union, and the long-range economic plans of the lands of peoples' democracy represent the beginning of a new stage in the economic collaboration of the fraternal socialist countries, in the development of international socialist division of labor, in utilization of all the advantages inherent in the world system of socialism. Based on the principles of complete equality and brotherly mutual aid, the economic cooperation of the socialist countries will, on the one hand, make it possible for each country to utilize its natural resources and economic possibilities as rationally and in as all-sided fashion as possible, to speed the rates of the upbuilding of socialism, and on the other hand will facilitate unification of their efforts in the interest of strengthening the might of the entire world system of socialism. The great principles of socialist internationalism, tried and proved in life, will find concrete expression in the political, economic and cultural collaboration among the socialist countries.

The economic cooperation of the countries of socialism will facilitate rapid advancement of those that are less developed in the technical and economic sense to the levels of the advanced countries, so as to attain a common mighty upsurge. The higher the economic and scientific-technical level of one or another socialist country, the greater the assistance it gives to other fraternal countries. Suffice it to note that some 600 major industrial enterprises have been, or are being, built with the all-round assistance of the Soviet Union in the lands of peoples' democracy.

The development of the economy of each socialist country is being tied ever more closely together with the economic development of the other socialist countries. Thus, the Soviet Union, delivering ore, and Poland delivering coal, facilitate the development of the iron and steel industry in the European countries of peoples' democracy. Cooperation with Hungary has permitted Czechoslovakia to organize its own aluminum industry, and cooperation between Hungary and Rumania opens broad perspectives for the creation of a Hungarian industry for the processing of Rumanian natural gas. The deliveries of various types of equipment and machinery from the Soviet Union, as well as from Poland, Czechoslovakia and the German Democratic Republic, and scientific and technical collaboration between the Chinese People's Republic and these countries, are of enormous significance in accelerating the industrialization of People's China. In turn, the Chinese People's Republic is delivering to the Soviet Union on an ever larger scale — and also to the European countries of peoples' democracy — the products of its mining industry, its agriculture, etc. Of pronounced significance to the development of the economy of the Korean Peoples' Democratic Republic and the Democratic Republic and the Democratic Republic of Viet-Nam, are deliveries of equipment and raw material from China. All these instances, and they could readily be multiplied, testify to the fact that the world socialist system of economy plays an ever increasing role in the development of each of the socialist countries.

In recent years, there has been a considerable expansion of the scale of production in the lands of socialism, and dozens of new branches of industry have been founded. Output of production is growing at a rapid pace, and the list of products is increasing. Under these circumstances, in accordance with the law of planned, proportional development of the national economy, a closer planned linkage of the economic development of the countries of the world socialist system has become an important objective. The pressing necessity has arisen for transition to broad economic collaboration among the socialist countries directly in the field of production, to a deeper division of labor among the fraternal countries, and to realization of the more rational distribution of production within the world socialist system.

At the present time, the main form of economic collaboration among the socialist countries is usually coordination of the plans of the socialist countries for development of interrelated branches of the economy, something that will, on an ever increasing scale determine the scale and direction of development of all other forms of collaboration among these governments.

In May, 1958, a conference was held of representatives of the Communist and Workers' Parties of the countries participating in the Council of Economic Assistance — Albania, Bulgaria, Hungary, the German Democratic Republic, Poland, Rumania, the Soviet Union, the Party of the Working People of Viet-Nam, the Korean Labor Party, and the Mongolian Peoples' Revolutionary Party also present. The conference examined questions of further expansion and deepening of economic collaboration among the socialist countries on the basis of a consistent realization of the international socialist division of labor, of rational specialization and integration of their production. The conference heard information reports on the work of the state planning organs of the socialist countries in developing the long-range plans for the development of the major branches of the national economies of the countries participating in the CNEA. The conference examined questions of coordination of the plans for development of mutually related branches of the economy for the years until 1965. At the 9th (June, 1958) and the 10th (December, 1958) sessions of the CNEA, specific recommendations arising out of the decisions of the May conference of representatives of the Communist and Workers' Parties of the countries participating in the CNEA were discussed and adopted. The comradely coordination of the plans of development of mutually related branches of the economies of the socialist states is a concrete manifestation of the further development and deepening of the international socialist division of labor. The coordination of the plans for the national economies of the countries of socialism in mutually-related branches of the national economy, specialization and coordination of their production, joint solution of the most important scientific and engineering problems, makes for the most rational utilization of the raw material resources and productive capacities of the entire world socialist system, for accelerated rates of technical progress in socialist countries, for reduction in cost of production and increase in the manufacture of the most important products. All this makes for an even more rapid development of the economies of the socialist countries and growth in the power of the world socialist system.

The Soviet Union and the lands of peoples' democracy have already gotten under way practical work for specialization and integration of their production on the basis of careful consideration both of the interests of each country and of the common interests of all the countries included in the socialist camp. In the process of development of multi-lateral as well as of bi-lateral collaboration, the

foundations are being laid for planned division of labor in the world socialist system. Thus, the member states of the CNEA have reached contractual agreements on comradely coordination of plans for development of the industries manufacturing machinery, the iron and steel and nonferrous metals industries, the coal, the petroleum, the chemical, and certain other branches of production.

The seven-year plan for the development of the national economy of the USSR, and the long-range economic plans of the countries of peoples' democracy, mark a higher level of coordination in the development of a number of the most important branches of their economies, the more complete and exact consideration of their mutual requirements, and the possibilities of satisfaction thereof. Let us, for example, take the problem of development of the iron and steel industries of the European countries of peoples' democracy. We know that virtually all the lands of peoples' democracy in Europe are lacking in iron ore or have very poor ores, and that these countries also lack the ores of many alloying metals. The Soviet seven-year plan envisages increasing iron ore production in the Ukraine and in the central districts of the RSFSR, so as to satisfy the needs not only of our own iron and steel industry in the south and center, but to supply iron ore to Poland, Czechoslovakia, the German Democratic Republic, and a number of other European countries of peoples' democracy. Soviet deliveries will relieve certain countries, Poland, for example, of the need to put enormous funds into mining low-grade iron ores. At the same time, Poland is providing, in its long-range national economic plan, for all-out development of coal mining, with consideration not only of its internal needs, but of the requirements of the fraternal countries. In the development of the coal industry, Poland will give assistance to other socialist countries, particularly Czechoslovakia and the German Democratic Republic.

Let us cite another, not less characteristic example. The gigantic program of development of the chemical industry envisaged by the Soviet Union in its seven-year plan will be realized to a considerable degree with the assistance of the German Democratic Republic and Czechoslovakia, which will deliver equipment for the chemical enterprises being built in our country. In turn, the USSR will provide important raw materials to many branches of industry in these countries.

Problems of economic collaboration with the fraternal countries occupy one of the central places in the long-range plans for the national economies of Poland, Czechoslovakia, the German Democratic Republic, and other socialist countries.

Further work has to be done in the field of comradely coordination of the plans of interrelated departments of the economy, in seeking out the most rational ties along lines of specialization and cooperation of production in the socialist countries. Many specific problems arise, which in essence reduce themselves to the problem of (while utilizing internal resources to the full) establishing in each country the production of products with minimum expenditures of social labor, and in exchange thereof of obtaining the required products from other socialist countries, that can be produced there, too, with minimum outlays of social labor. Work along these lines is being pursued in each socialist country. Thus, for example, the 11th Congress of the Communist Party of Czechoslovakia pointed to the need, in elaboration of directives for the long-range national economic plan for the country, of making certain changes in the structure of the Czechoslovak machine-building industries with the object of improved coordination of its development with the needs of the other countries of the world socialist system. The seven-year plan of the Soviet Union and the plans of the lands of peoples' democracy require an extension of the work being done along these lines.

The collaboration of the lands of socialism in the fields of science and technology is also rising to a new and higher level. The mutual ties of the socialist countries in the fields of science and technology will be deepened and extended and, what is most important, there will be a broader coordination of the work of scientific, planning, and designing organizations in the various countries. The activities of the academies of sciences and of the scientific research institutions of the socialist countries will be combined to an ever greater degree with the object of finding the most efficient solution of the scientific problems of greatest importance.

The ties of the socialist countries in the field of foreign trade will be closely coordinated with the long-range plans for the development of their national economies, and will be directed to successful fulfillment of these plans. The foreign trade turnover of our country with other socialist countries will rise more than one and one half times from 1958 to 1965.

The Soviet Union has already signed long-range agreements with a number of the fraternal countries covering mutual shipments of commodities up to 1965. Analogous agreements have been concluded among the individual lands of peoples' democracy. The comradely coordination of the national economic plans of the lands of socialism, the broad development of inter-governmental specialization and cooperation in the fields of related branches of the economy, and of heavy industry in the first place, provide conditions for a pronounced increase in mutual deliveries, by the socialist states, of the products of the machine manufacturing, mining, chemical, and other branches of industry, of agricultural raw materials, and consumer goods.

The extensive economic program of peaceful construction in our country, elaborated by the Communist Party of the Soviet Union, and the economic programs of the lands of peoples' democracy will open new possibilities for further development of the foreign trade of the socialist countries with all the countries of the world.

The close collaboration of fraternal countries is the result of conscious, planned activity on the party of the working people of the socialist countries, led by the Communist and Workers' Parties. The magnificent plans for the development of the national economy of the Soviet Union and of the lands of peoples' democracy demonstrate that, the greater the efforts made by the working people for the development of the economy, the more fruitful become the mutual economic ties of the lands of socialism, and the more rapidly is the strengthening of the world socialist system.

Realization of the historic decisions of the 21st Congress of the Communist Party of the Soviet Union, further growth in the economic potential of all the socialist countries, will assure a decisive balance in favor of peace in the relationship of forces in the international arena. Fulfillment of the national economic plans of the Soviet Union, and of the lands of peoples' democracy in Europe and Asia will create real possibilities for doing away with war as a means of resolving international problems. This is the most important conclusion, in terms of the future of mankind, arrived at by the 21st Congress of the Communist Party of the Soviet Union.

The working people of the Soviet Union, giving all their strength for successful fulfillment of the seven-year plan, and paving a road into a bright communist future for all of

(Continued on Page 88)

S. Kheynman

The Development of Industry During the Seven-Year Plan

The Soviet Union has entered a new and most important period in its development — the period of all-out upbuilding of communist society. "The great objective of building communism," the resolution of the 21st Congress of the CPSU states, "for the attainment of which many generations of men have struggled is today being realized in practice by the Soviet people under the leadership of the Communist Party."

In the process of the building of communism, as during the period of the building of socialism, the decisive role is played by the development of socialist industry, heavy industry in the first place. The Communist Party of the Soviet Union ascribes primary significance to the development of heavy industry, which is the foundation of foundations of the socialist economy, of the power of the country, and is the decisive factor in the development of the productive forces, of technological progress, and of increasing the productivity of labor in all branches of the national economy. The cardinal proposition of Marxist-Leninist economic theory to the effect that heavy industry must be given priority in development, has again been embodied in the seven-year plan for the development of the national economy of the USSR for 1959-1965, the target figures for which were approved by the extraordinary 21st Congress of the Communist Party of the Soviet Union.

The results of the development of industry in the world's first land of socialism constitute the most convincing proof of the decisive advantages of the socialist system of economy over the capitalist. In a period of 22 years — 12 before the war (1928-1940) and 10 subsequent thereto (1948-1958) — during which the Soviet people was able to engage in peaceful, creative activity, our country, which had lagged far behind both the United States, and other industrially developed countries of Europe — England, Germany and France — was converted into a powerful industrial state. In overtaking the capitalist countries of Europe, the USSR has constantly drawn closer to the level of industrial production of the richest capitalist country, the United States of America.

The rapid rates of growth of Soviet industry, which have no parallel in the history of most capitalist countries, are common knowledge. In recent years, the volume of industrial production of the USSR has grown on an average of 10%. From 1948 to 1958, it multiplied 3.6 times, while in the United States industrial production rose by 37.5% from 1948 to 1957, and declined by 6.5% in 1958.

The high rates of growth of industrial production were and are a most important factor in the upbuilding of socialism and communism. In addition to rates, the most important indices testifying to the victories of socialist industry, are the absolute volume of industrial production, and the scale of absolute increase in output, attained. These two indices are of the very greatest significance for a characterization of the conditions and periods required for solution of the problem of creating the basis for communism in our country in material technology.

The following table shows the volume of industrial production in the USSR and in the most highly developed capitalist countries of Europe for the most important types of products of heavy industry in 1958 (in millions of tons):

	USSR	England	West Germany	France	Italy
Iron	39.6	13.2	16.7	12.0	2.1
Steel	54.9	18.7	22.8	14.6	6.3
Coal	496.0	216.3	133.8	57.8	0.7
Electrical Power (billion kwh)	233.0	113.1	91.6	57.7	44.2
Cement	33.3	11.8	19.9	13.7	12.2

A striking picture of the growth of our industry, characterizing the fundamental stages in its development and the enormous advantages of socialism, is provided by a comparison of the dynamics of the levels of production of the most important types of output of heavy industry in the USSR and the USA. The table shown on the following page shows the change in volumes of production of metals, coal and oil, electrical energy and cement in the USSR and the USA during four periods (1913-1928, 1928-1940, 1940-1948, and 1948-1958; in millions of tons).

In 1928 Soviet industry had barely reached the level of 1913, while the production of industry in the USA had substantially risen during the same period of years. As a result, when the USSR began the fundamental reconstruction of the national economy and realization of the first five-year plan, our country lagged behind the USA in volume of industrial production even greater than in 1913.

However, in the years of the pre-war five-year plans, the decisive advantage of socialism over capitalism found reflection not only in the rate, but in the absolute volume of growth of production of the most important types of industrial products. During the 12 prewar years, the absolute increase in the smelting of metal, the mining of coal, and the production of cement in the USSR was significantly greater than the rise in production of these types of products in the USA. The production of petroleum in this period rose in the USSR almost twice as rapidly, and the production of power five times as rapidly as in the USA. But the absolute increase in production in the USSR in these fields remains smaller than in the USA.

	1913	1928	Change in 15 years (+ -)	1940	Change (1928-1940)	1948	Change (1940-1948)	1958	Change (1948-1958)
USSR									
Pig Iron	4.2	3.3	- 0.9	14.9	+ 11.6	13.7	- 1.2	39.6	+ 25.9
Steel	4.2	4.3	+ 0.1	18.3	+ 14.0	18.6	+ 0.3	54.9	+ 36.3
Coal	29.1	35.5	+ 6.4	165.9	+ 130.4	208.2	+ 42.3	496.0	+ 287.8
Oil	9.2	11.6	+ 2.4	31.1	+ 19.5	29.2	- 1.9	113.0	+ 83.8
Power (billion kwh)	1.9	5.0	+ 3.1	48.3	+ 43.3	66.3	+ 18.0	233.0	+ 166.7
Cement	1.5	1.8	+ 0.3	5.7	+ 3.9	6.5	+ 0.8	33.3	+ 26.8
USA									
Pig Iron	31.5	38.7	+ 7.2	43.0	+ 4.3	56.2	+ 13.2	52.4	- 3.8
Steel	31.8	52.4	+ 20.6	60.8	+ 8.4	80.4	+ 19.6	77.3	- 3.1
Coal	517.0	522.5	+ 5.4	464.8	- 57.7	595.7	+ 130.9	376.6	- 219.1
Oil	33.6	121.5	+ 87.9	182.4	+ 60.9	272.3	+ 89.9	327.5	+ 55.2
Power (billion kwh)	24.8	108.1	+ 83.3	179.9	+ 71.8	336.8	+ 156.9	716.2	+ 379.4
Cement	15.3	30.4	+ 15.1	22.7	- 7.7	35.3	+ 12.6	52.3	+ 17.0

The war with Hitlerite Germany and imperialist Japan threw the development of our country's industry back by approximately eight years. In 1948, the production of metals, petroleum and cement in the USSR attained only the level already reached in 1940. As concerns industry in the United States, the war, which did not touch its territory, was merely a favorable growth medium. The increase in war orders stimulated a rapid growth in industry. In 1948, the volume of industrial production in the USA was 54% higher than in 1940.[1] Nevertheless, in 1948, the lag of Soviet industry behind that of the USA in absolute volume of production was considerably smaller than in 1913, as will be seen from the following table:

Volume of USSR Production As % of Volume of Production in the USA

	1913	1948
Pig iron	13.3	24.4
Steel	13.2	23.2
Coal	5.6	35.0
Petroleum	27.4	10.7
Electrical energy	7.7	19.7
Cement	9.8	18.4

The past decade (1948-1958) is marked by a transition to a qualitatively new stage in the economic competition of the USSR with the USA. During this period, the socialist industry of our country, starting from a very high level of industrial development, has recorded substantially greater absolute increases in the volume of production of the most important branches of production than the USA. It is remarkable that in 1948-1958, the USSR has overtaken the USA in absolute increase in petroleum recovery. Only in the field of electric power has the absolute increase continued to be smaller. As noted by Comrade N. S. Khrushchev at the 21st Congress of the Communist Party of the Soviet Union, a qualitatively new stage has been reached in the competition between the USSR and the USA, "...Today, our country surpasses the USA both in rates and in absolute increase of production per year. We are striding forward four times a rapidly and are adding more new production each year, which means that it will now be considerably easier to catch up with the Americans."

In all, the relationship of volume of production between the USSR and the USA has changed significantly in favor of the USSR.

Volume of Production in USSR as Percentage of USA

	% of USA, 1957	% of USA, 1958
Pig iron	55.0	75.6
Steel	53.6	71.0
Coal	106.0	132.0
Petroleum	32.0	34.6
Electricity	32.6	32.6
Cement	65.5	63.6

These are the successes with which Soviet industry has reached a historic dividing line at which the USSR has entered the decisive stage in the economic competition with capitalism and has undertaken the practical realization of the task of creating the foundation for communism in material technology.

The directions to be followed in creating the material and technological basis for communism have been defined as follows in the report by Comrade N. S. Khrushchev at the 21st Congress of the Communist Party of the Soviet Union: "The creation of the material and technological basis for communism requires primarily: the existence of a highly-developed modern industry, complete electrification of the country, scientific and technological progress in all branches of industry and agriculture, all-round mechanization and automation of all the processes of production, the fullest utilization of new sources of energy, of the exceedingly rich natural resources, of new synthetic and other materials, an increase in the cultural and technical level of all working people, a further improvement in the organization

(1) The Handbook of Basic Economic Statistics, January 15, 1959, p. 72.

of production and an increase in labor productivity." The leading role in the solution of these historic problems is that of socialist industry, heavy industry in particular.

The most important statistics characterizing the level of industrial production necessary to establish the material and technological basis for communism have been indicated in the report by Comrade N. S. Khrushchev at the anniversary session of the Supreme Soviet of the USSR, November 6, 1957. These goals for industrial production are calculated for a period greater than the seven-year plan, and provide foundation for the long-range plan for the development of the national economy for fifteen years, now being elaborated. The seven-year plan, the control figures for which were approved by the 21st Congress of the Communist Party of the Soviet Union, is a most important part of this long-range plan for the development of the economy and culture of our homeland. The following data illustrate the scale of the upsurge in industrial production in the seven-year plan and the significance of the seven-year plan of the USSR for fulfillment of the long-range program for the upbuilding of communism.

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	1958[2]	1965[3]	Increase 1958-1965		1972[4] (according to long-range plan)	Remaining for attainment by 1972 upon reaching 1965 level	
			Entire period	Average per year		Total from 1965	Average annual increase
Iron ore (million tons)	88.8	150-160	61-71	8.7-10.2	250-300	100-140	14.7-20.0
Pig iron (million tons)	39.6	65-70	25-30	3.6-4.4	75-85	10-15	1.4-2.1
Steel (million tons)	54.9	86-91	31-36	4.4-5.1	100-120	14-29	2.0-4.1
Oil (million tons)	113	230-240	117-127	16.7-18.1	350-400	120-160	17.1-22.9
Gas (billion cubic meters)	30	150	120	17.1	270-320	120-170	17.1-24.3
Electricity (billion kwh)	233	500-520	267-287	38.1-41.0	800-900	300-380	42.9-54.3
Cement (million tons)	33	75-81	42-48	6.0-6.9	90-110	15-29	2.1-4.1

The increase in the volume of gross production of industry from 1959 to 1965 will be approximately 80%. This increase represents an annual rise of 8.6% in production. The absolute scale of increase in the most important areas of industrial production during the upcoming seven-year plan has no parallel in history.

In compiling the seven-year plan, the possibility was provided for fulfilling it without excessive strain. Analysis of the target figures for development of the USSR economy set down in the seven-year plan for the various types of production testifies to the existence of reserve capacities for over-fulfillment of the planned goals. Thus, the average annual rates of increase in the smelting of pig iron are set at 3.6-4.4 million tons. However, in 1958 alone, new pig iron capacities of 4.9 million tons per year were actually started. Major reserves for increasing pig iron production may be brought into operation by improving the utilization of blast furnaces.

The coefficient of utilization of the useful volume of blast furnaces for the USSR as a whole averaged 0.77 in 1958 while at the Magnitogorsk plant it had reached 0.63 as early as 1957 (and 0.607 at some furnaces), while at the Kuznetsk plant it was 0.695 in 1956. Improvement in the efficiency of utilization of blast furnace volume by nearly 0.01 would mean an increase of a million tons of pig iron production per year during the seven-year plan. The objective of attaining an average blast furnace efficiency level of 0.70 for the USSR as a whole is entirely realistic, and plants doing a good job of preparing the raw materials and utilizing oxygen and gas are capable of attaining an efficiency of 0.60.

The average annual increase in the melting of steel, according to the target figures, is 4.4-5.1 million tons, or 8.9% of the volume of steel melting in 1958. The reserves available to steel production by improved utilization of installations are also quite considerable. At the present time, the amount of steel taken from each square meter of open-hearth furnace averages 7.55 tons for the Soviet Union as a whole, and 9 tons at the most advanced plants. Increase in the production of steel per square meter of open-hearth furnace by only 0.1 tons would provide an increase of 800,000 tons of steel production per year in the USSR as a whole.

The average annual increase in electric power output planned for the seven-year plan is 38-41 billion kwh, which corresponds to an annual increase of 7-8 million kw in capacity per year. However, the USSR was already producing turbines of a total of 6.6 million kw capacity in 1958, and in 1965 the turbines manufactured each year will have a power of 18.7-20.4 million kw.

The increase in petroleum output per year during the seven-year plan is scheduled to average 16.7-18.1 million tons. In 1958, the actual increase in petroleum recovery was already almost 15 million tons. The production of cement will increase annually by an average of 6-7 million tons. The launching of new capacities in the cement industry in 1958 came to 5 million tons.

Thus, the objectives of the seven-year plan in increasing the production of the most important types of industrial output are entirely realistic, and there is every basis for the assumption that they will be over-fulfilled. The data in the table above also indicate that after fulfillment of the seven-year plan, less than seven years more will be required to attain the levels set for 1972 in the speech by Comrade N. S. Khrushchev at the anniversary session of the USSR Supreme Soviet on November 6, 1957. In metal and cement, the average annual increases in production in

2) Communication of Central Statistical Administration of the USSR on results of fulfillment of 1958 plan.
3) Target figures for seven-year plan of development of USSR economy, 1959-1965.
4) N. S. Khrushchev, Forty Years Since the Great October Socialist Revolution, Pravda press, 1957, p. 42.

1965-1972 do not exceed the average annual increases planned for the current seven-year plan, and in gas and petroleum they are very close to the gains envisaged by the seven-year plan. The volume of turbine production in 1965, which is to 18.7-20.4 million kw capacity, according to the target figures, will provide, as early as 1966, an increase in annual production of electric power of approximately 90 billion kwh, while during the entire period from 1965 to 1972, according to the outlines available, the increase in power production scheduled is to be 300-380 billion kwh. Even if the annual rate of turbine production after 1965 be held to the level of 1965, it is possible to assure introduction of new capacities adequate to increase electric power output by 300-380 billion kwh in approximately 1969-1970.

The scales of increase in industrial production planned for 1959-1965, have no precedent in the history of world industry.

Capitalist economists not infrequently assert that the high rates of growth of industry in the Soviet Union are to be explained by the low initial level of development of Soviet industry. Let us see what period of time was required by the United States of America to attain the level of production corresponding to that planned for the USSR in 1965 from a level analogous to the contemporary level of industrial production in the USSR. In order to attain the same increase, from the same starting point, that the USSR is to achieve in seven years, American industry requires the following: in pig iron smelting 35-37 years, in steel smelting 21-22 years, in coal mining 31-32 years, in petroleum recovery 19-21 years, in gas production 25 years, and even in the production of electric power which rose in the United States at unheard-of speeds, 11 years.

These data provide an irrefutable proof of the fundamental advantages of the socialist system of economy over the capitalist.

The high rates and scales of growth in production in the seven-year plan are founded upon important qualitative shifts in the structure of all the branches of the economy. Improvement in the structure of industrial production is called upon to assure a maximum economy of labor and material goods, an acceleration of the economic growth of the USSR in every possible way, starting from the need to gain time in the economic competition with the most advanced capitalist countries.

Given priority rates of increase in heavy industry, the seven-year plan envisages forced development of the electric power foundation of the economy, before all else. In recent years, the increase in electric power production in the USSR did not lead the increase in the total volume of industrial production adequately, and in some years actually lagged behind it. For example, from 1940 to 1955, the physical volume of industrial production in the USSR grew 220%, while the industrial consumption of electric power rose from 32.1 billion kwh in 1940 to 113.3 billion kwh in 1955, or 250%, or in other words, the increase in electric power production was about 9% greater than the increase in the volume of industrial production. During the upcoming seven-year plan this difference will become substantially wider, attaining 19-24%. An 80% increase in industrial production during the seven years will be accompanied by a 120% increase in the consumption of electric power by industry.

The more rapid increase in industrial power consumption than in the volume of production itself is due to two factors: the increase in the share of electricity-consuming branches in the structure of industry, and the intensive electrification of industrial processes throughout industry as a whole.

The influence of structural shifts in the economy upon increase in electrical consumption may be illustrated by the following data of the United States Census Bureau on increase in the consumption of electrical power in a number of branches of heavy industry in the United States where power consumption is particularly great:

	Index of physical volume of production (1955 as % of 1947)	Electric power consumption (billion kwh)		Increase in electric power consumption, 1947-1955	
		1947	1955	billion kwh	% of 1947
All manufacturing industry	140	140.9	299.3	158.4	212
Including:					
Chemical Industry	172	19.6	90.0	70.4	459
Ferrous and Non-ferrous metals	136	40.6	76.0	35.4	187
Transportation equipment	212	6.1	14.3	8.2	236
Pulp and paper industry	154	15.4	25.7	10.3	167

In 1939-1955 when the volume of industrial production in manufacturing industry in the USA rose 40%, its electric power consumtpion rose 325%, meaning the lead was approximately 77%.

Almost 80% of the increase in electric power consumption in 1947-1955 was in four branches of industry: the chemical, metallurgical, pulp and paper, and transport equipment, including a very rapid increase in the aircraft industry. The increase in electric power consumption in these branches ran substantially ahead of the increase in the volume of production. Thus, in the chemical industry, the volume of production rose 70%, while consumption of electric power rose 360%. The production of the metal industry rose 36%, while the consumption of electric power in that branch of industry rose 87%.

The substantial increase in production in chemistry, metals manufacture, and other branches of industry consuming much power, has to be accompanied by a corresponding increase in electric power production.

The increase in the share of thermal stations in the country's power balance planned for the seven-year plan will make it possible to speed the launching of operations of new capacities, while the increase in the share of oil and gas in the fuel balance will assure a significant

improvement in the technical and economic indices of thermal power production. Of 58-60 million kw of new capacities to be launched at turbine-powered power plants, 47-50 million kw, or 81-83%, represent the capacities of thermal plants. Changes in the ratio between the construction of thermal and hydraulic power plants during the seven-year plan will make it possible to bring into operation about 10 million kw of capacities, which is approximately equal to five hydroelectric plants such as that at Kuibyshev.

The increase in recovery of gas and oil during the seven-year period will fundamentally change the structure of the fuel balance. The total economy from substituting natural gas and oil for coal will be over 125 billion rubles during the seven-year period. This sum is equal to the entire capital investment provided, in the seven-year plan, for construction of power plants, and power and steam lines.

One of the most important problems in the seven-year plan is providing raw materials and other materials to growing industry. We are speaking not only of an increase in the volume of production of raw materials but of a sharp improvement in their quality, economy in production, processing and utilization.

The most important material employed in producing the means of production is today and will, in the foreseeable future, continue to be iron and steel. The seven-year plan envisages an enormous increase in the production of pig iron, steel and rolled steel. In 1959-1965, there will be a substantial increase in the technical level of Soviet ferrous metallurgy and a significant improvement and expansion in the assortment of finished rolled metal produced. Powerful metal-manufacturing installations, with mechanization and automation at a high level, will be built: the world's largest blast furnaces, with volumes of 2,000 and 2,286 cubic meters, open-hearth furnaces of 500 tons capacity and more, 80 and 180 ton electric furnaces, continuous automated rolling mills of three-four million tons annual capacity. The result of fulfillment of the seven-year plan will be that the blast furnaces and steel-melting units of the Soviet iron and steel mills will substantially exceed similar units in the USA in capacity. The average capacity of American blast furnaces, according to data from the beginning of 1957, was 300,000 tons per year. In the USSR, the average smelting of pig iron per blast furnace in 1958 was 341,000 tons and in 1965 it will attain 543,000 tons. The capacity of open-hearth furnaces in the USA at the beginning of 1958 was 119,000 tons per year. In the USSR, the melting of steel per furnace in 1958 was 125,000 tons, and in 1965 it will attain 200,000 tons.

The high level of concentration of production creates conditions for a significant upsurge in labor productivity and reduction in the cost of pig iron and steel. During the oncoming seven-year plan, there will also be an increase in the level of technology of the rolling mill field. The launching of 82 high-output continuous rolling mills, providing high rolling speeds and a high level of automation, will raise the level of technology in the rolling field considerably.

During the seven-year plan, new and progressive technological processes will come into wide use. Thus, in 1965, the proportion of pig iron smelted with oxygen blow will be 35-40% of the total smelted. The production of steel with the aid of oxygen will rise from 13.9 million tons in 1958 to 64 million tons in 1965 or in other words by 350%. The use of oxygen will enable existing units to yield an additional 3 million tons of pig iron and 8 million tons of steel per year, while the capacity of blast furnaces will rise by 8-10% and that of open-hearth furnaces by 20-30%.

A most important task in the development of metallurgy is increasing the assortment of rolled metal and the output of the most progressive and economical forms thereof. In 1955, the share of sheet steel in the total output of rolled metal in the USSR was 29.5%, while in the USA it was 56.4%, and thin sheets constituted 32.8%. During the last 19 years, the share of cold rolled sheet in the total output of rolled sheets virtually doubled in the United States. The high proportion of rolled sheet in the USA does not reflect only the hypertrophied development of the automobile industry. Even if all the rolled products utilized by the auto industry of the USA are omitted, the share of sheet metal in total production of rolled metal was still 47.5%, taking the data of 1956. These figures are an indirect index of the significance of thin rolled sheets for modern industry and technology.

In the seven-year plan, in which the production of rolled metal will rise 53-63%, the output of sheet steel will double. Also provided for are accelerated rates of production of alloy and low-alloy steels, and economic lightened and periodic types of rolled metal. The production of rolled bent shapes from sheet and strip, as well as the heat treatment of rolled metal, is to be organized. All this will significantly improve the economics of the equipment and of structural fabrications.

Modern industry and engineering provide an ever increasing market for the non-ferrous and rare metals. This tendency in technical progress is reflected in the seven-year plan. The production of aluminum will rise 180% to 200% by 1965. Copper production will almost double. Production of nickel, magnesium, titanium, germanium, silicon, and other non-ferrous, and particularly rare, metals will increase at high levels.

The seven-year plan envisages mass utilization of new artificial and synthetic materials as raw materials for industry. This will become possible as the result of a great development of the chemical industry, which will triple its output during the seven-year period. Within it, the production of artificial polymer materials will rise at particularly rapid rates: plastics and synthetic resins by more than seven times, and synthetic staple fiber by 12-13 times. The efficiency of the new raw materials is testified to, for example, by the fact that one ton of polymer resins replaces as much as four tons of lead in the cable industry.

The production of polyethylene and polypropylene materials, which find utilization in the production of tubes, armatures, film, electrical insulators, fibers, and many other products, will multiply 246 times by 1965. There will be a 16-fold increase in the production of acetyl cellulose, from which high-quality staple fiber and fire-proof film are made. While synthetic rubber production will show a total increase of 270%, the capacities for manufacture of the most progressive types of synthetic rubber, and specifically of butyl rubber, will rise 28 times. Capacities for production of isoprene rubber, which completely reproduces all the properties of natural rubber, will be built from scratch.

A whole series of valuable industrial raw materials will be obtained as the result of speeded development of the pulp and paper industry. The production of viscose cellulose, which is the starting material for production of high-quality artificial staple fiber, will increase 350%. The planned target figures for increasing production of packaging cardboard from 70,000 tons in 1958 to a million and a half tons in 1965, in other words more than 21-fold, will be of major significance in the national economy. Thanks to this increase in production of this highly-economical packaging material, it will be possible to save tens of millions of cubic meters of milled wood. The scope of the monetary economy may be indicated by the fact that in 1955 the cost

of the packagings utilized in the national economy came to 10 billion rubles.

The technological progress in all branches of the national economy, the all-round mechanization and automation of production processes, will be assured by accelerated growth of the machinery-manufacturing industry, which is the heart and soul of heavy industry. Although industry as a whole will rise 80% during the seven-year period, the production of the machinery-manufacturing industry will virtually double.

The machinery-manufacturing industry is called upon to assure an adequate output of highly-progressive tools of labor, corresponding to the present level of science and engineering and facilitating a further development of technological progress. Considerable changes will occur in the structure of this industry, to assure favored growth for those branches which facilitate subsequent rapid improvement in the national economy.

In 1965, the USSR will overtake the USA in total capacity of turbines manufactured per year. In the United States, the annual output of turbines has not exceeded 16 million kw power in recent years. In the USSR, it will be 18.7-20.4 million kw in 1965. In the output of metal-working machine tools, the USSR will also attain the present level of production in the USA in 1965. Such particularly new branches of machinery manufacture as the output of mathematical computers, the gross manufacture of which will be valued at more than two billion rubles in 1965, will also progress at very rapid rates.

The utilization of rapid electronic computers opens wide possibilities for transition to a higher stage in automation, the automatic guidance of production processes, departments, and entire enterprises. Rapid electronic computer technology makes it possible to select the most efficient and economical technological processes and automatically to maintain the most profitable flow sheets in technology. Wide utilization of this technique will assure a colossal saving of labor and production, in the carrying out of scientific investigations, and in making samples of new machines.

The techniques of electronics open wide possibilities for automation of the processes of assembling and elaboration of information — a sphere of activity which absorbs the labor of millions of office personnel at enterprises, in institutions of business administration, in financial and credit institutions, and in offices for purchase supply and distribution. Fast electronic calculating machines will make possible a fundamental improvement in technical and economic calculations, will create the possibility of posing and solving the most complex economic problems having to do with selection of the most efficient variants in the structure of production in particular branches and in the national economy as a whole, and this will be a significant factory in improving the quality of national economic planning.

During the oncoming seven-year plan, it is planned to increase the manufacture of electrical and diesel locomotives 200%. This is a most important objective of the plan, the fulfillment of which should serve to assure a fundamental technical reconstruction of railway transport. Whereas in 1958, only 26% of the total freight turnover was accounted for by electric and diesel engines, in 1965, 85-87% will be represented by electrical and diesel power. The length of railways converted to electrical and diesel haulage will be approximately 100 thousand kilometers.

The manufacture of power equipment, of equipment for the chemical and cement industry, and of rolling mill equipment, will increase at rapid rates during the seven-year period. Instrument manufacture (excluding mathematical computers) will rise 150-160%. While the total volume of manufacture of metal-cutting machine tools and of forges and presses will rise approximately 50%, the manufacture of automatic machine tool lines, and of special, specialized, and multi-purpose machine tools will more than double. The production of technological equipment for the light and food industries will increase on the same scale.

The objective of a further increase in the productivity of labor requires that the structure of the production of equipment be such as to assure introduction of the most progressive and efficient technological processes into the manufacture of machinery itself. We know that in the USSR the working of metals by cutting predominates in the machine-building industry. As reported at the 21st Congress of the CPSU, over four and one half million tons of metal go into chip each year, and the machinery-manufacturing plants lose about 25 billion rubles per year thereby. In the seven-year plan, with its increasing volumes of production, the significance of saving metal in the process of machining will become many times greater. This demands the utilization of such machines and technological processes as would permit a sharp reduction in the metal lost in the process of manufacture. The chief direction to be followed in improving the processing of metal is the substitution of forging and pressing machines for metal-cutting machine tools. The new machines assure high accuracy in forgings.

The share of metal spinning machines in the total volume of the metal-working equipment of the USSR is still inadequate. In 1958, 138,000 metal cutting machine tools and just under 25,000 units of forging and pressing equipment were built. In the United States, in 1957, production of metal-cutting machine tools was 151,000, but that of forges and presses was 64,000. Thus, while in the USSR the production of forges and presses is 18% as great as the number of metal-cutting tools, in the USA it is 42%.

In recent years, the ratio of manufacture of these two types of metal-working equipment in the USSR has improved most slowly. The output of metal-cutting machine tool and of forging and pressing machines has been, respectively: in 1955, 117,000 and 19,000, in 1965, 122,000 and 20,000, and in 1957 130,000 and 24,000. During the upcoming seven-year plan it will be necessary to force the equipment of the machinery-manufacturing industry with machines working metal by pressure instead of the currently dominant working of metal by cutting.

Of no less significance in the metal economy in machine building is the achievement of high precision in casting. The seven-year plan envisages a more than four-fold increase in the capacity of specialized plants producing casting equipment, and an expansion in the production of the latest kinds of equipment for precision casting.

A significant increase in the high precision of parts requires corresponding changes in the composition of the available pool of machine tools. There will be an increase in the percentage of grinding machines and a reduction in the percentage of machines doing rough turning. It should be noted that in 1957, the American machine tool industry produced 24,000 turning lathes and 63,000 grinders. In the Soviet Union, the data for 1955 shows the production of 31,000 turning lathes and 4,000 grinders. An increase in the precision of blanks will require an increase, during the seven-year plan, of the percentage of tools doing final finishing of parts.

Along with the system of machines, the technological level at which the fundamental processes of production are conducted will increase, the machinery-manufacturing industry must create samples and assure mass output of machines and instruments serving to mechanize and automate

the entire complex of auxiliary processes of production, and primarily the transporting and lifting operations and processes in intra-plant transport.

Mechanization of work in the modernization and repair of all mass types of equipment also deserves serious attention and requires organization of specialized manufacture of parts and assemblies. It is also necessary to develop mass production of standard and special tools, of standardized parts and assemblies for all kinds of dies and gigs, and of instruments for mechanized and automatic technical control.

The branches of the machinery-manufacturing industry producing equipment for mechanization of auxiliary and subsidiary operations have lagged considerably behind the growth of the branches producing working machines in their rates of development. This, common to a considerable degree, explains the fact that the number of auxiliary workers often is more than half the total number of industrial workers.

In addition to the creation and introduction of new machine tools and combined units, an important place in the seven-year plan is occupied by modernization of the equipment now in operation, thanks to which a rise will occur in the technological level of the existing pool of machine tools. Ordinary machine tools will be equipped with special assemblies and devices. The operations of transfer, in placement and removal of parts will be automated, and instruments for automatic control of the quality of production will be built. During the seven-year plan, it is proposed to modernize about 400,000 machine tools in the machinery-building industry alone, and this will increase their output capacity by an average of 25% and yield economies of several billions of rubles.

Modernization of the equipment of the textile enterprises in Ivanovo Oblast will make it possible to increase fabric output by 100 million meters. Expenditures upon modernization will pay for themselves in a year to a year and a half. The reconstruction and partial expansion of production areas in the textile enterprises of Moscow Oblast will provide an additional production of more than three billion rubles' worth of commodities although the expenditures will be lower by a factor of almost 1.6 than the cost of new construction to accomplish the same end. Modernization of existing equipment will also be carried out in other branches of industry.

Broad prospects for automation of universal equipment are opened in connection with the elaboration of methods and the development of devices for programmed and automatic management. This trend in the development of technology is of exceptional importance from the viewpoint of automation of enterprises for individual and small-run production.

In formulating the objectives of the seven-year plan, the 21st Congress of the Communist Party of the Soviet Union emphasized that the further significant rise in all branches of the economy, with priority increase in heavy industry, must provide the basis for a continuous increase in the living standard of the working people.

This finds expression in the considerable increase in the production of those branches of industry producing consumer goods. While the total increase in the production of department B will be 62-65% in the upcoming seven-year plan, large absolute rates of increase in production of the most important consumer products will be assured, greatly exceeding the absolute increases attained during preceding stages of the development of the Soviet economy. Comparison of the data on the production of the most important mass consumption products during the period of 1952-1958 and 1959-1965 show the growth in production in 1959-1965 in all the major types of consumer goods to be considerably greater than the growth from 1952-1958. In such products as meat, sugar, canned goods, knit goods, the increase planned for the seven-year plan will exceed the increase attained during the preceding 20 years (1938-1958).

One of the conditions for the creation of the material and technical basis for communism is, as was emphasized in the report by Comrade N. S. Khrushchev at the 21st Congress of the Communist Party of the Soviet Union, a further improvement in the organization of production and increase in the productivity of labor. This most important economic problem includes an extensive complex of questions of specialization and integration, the introduction of progressive principles of mass conveyor-belt production in shops, departments, and enterprises engaged in serial manufacture, the broad realization of standardization, unification, normalization, and combination of the tools of production and of the final products, as well as standardization of technological processes.

A major resource for increasing the level and the organization of production is the technical equipment and improvement of organization of auxiliary processes in production. The possibilities of mechanization and of improved organization of these processes are quite considerable, and the objective of attaining the 80% increase in production projected for the seven-year program, with no increase in the number of auxiliary workers, is entirely realizable. This factor alone, according to our calculations, would permit an increase in labor productivity in labor as a whole by 30%.

Under the new conditions of organization of the administration of industry by economic administrative districts, exceptionally favorable possibilities are created for solution of this most important problem of the further perfection of technology and the organization of industrial production. The national economic councils will be able to realize rapid and efficient redistribution of the redundant subsidiary workers and direct them to shops and departments where essential production is being carried on.

The seven-year plan envisages a 45-50% increase in labor productivity, calculated per worker, in industry from 1959 to 1965. The increase in hourly production will be even greater if one takes into consideration the planned reduction in the working day.

Our industry is in possession of major possibilities for significant increase in labor productivity. These possibilities involve further increase in the technical level and the supply of energy, major shifts in departmental structure, increase in the share of chemistry, machinery manufacture and other branches which play a decisive role in assuring technological process, large-scale introduction of new materials and progressive technology, and considerable resources, not yet employed, in the field of improvement of the organization of production. The new system of industrial management will yield an every increasing economic effect.

The considerable growth in the volumes of industrial production, the rise in labor productivity, and improvement in the culture of production will, in the oncoming seven-year plan, provide for a reduction in the cost of industrial products of not less than 11.5%, in comparable prices. "Today," Comrade N. S. Khrushchev noted in his speech at the 21st Congress of the Communist Party of the Soviet Union, "when each percentage reduction in cost of production represents a colossal figure exceeding 12 billion rubles, and at the end of the seven-year plan — 21 billion rubles per year — the struggle for reduction in costs and for

conditions of economy takes on particularly great significance."

The substantial increase in industrial production in 1959-1965 will be assured by major capital investments in industry. Capital investments in new construction and the reconstruction of enterprises is the foundation of the rapid rates of expanded socialist reproduction.

Total volume of government capital investment during the seven-year plan will be 1940-1970 billion rubles. Of this, industry will get about a trillion rubles, while from 1918 to 1957, capital investments in industry came to 919 billion rubles. Heavy industry will see 700 billion rubles invested, or slightly less than during the period from 1918 to 1957 (815 billion rubles).

The trend in capital investments in the various branches of industry is to be such as to assure the progressive shifts in the structure of industrial production noted above. The petroleum and gas industry will get the greatest capital investments. 170-173 billion rubles will be invested therein, or 2.3-2.4 times more than during the preceding seven years. Second place will be taken by investments in the construction of power plants, electrical and steam lines: 125-129 billion rubles, 70% more than 1952-1958. Third place in scope of capital investments, but first place in rate of increase in capital construction will be occupied by the chemical industry. Whereas, from 1952 to 1958 capital investment in the chemical industry was 19.9 billion rubles, during the new seven-year plan it will increase to 100-105 billion rubles, or in other words an increase of 5-5.3 times. 118 billion rubles is the figure for capital investment in the machinery manufacturing industry, 100 billion in the iron and steel industry, and 75-78 billion in coal mining.

The Communist Party ascribes first-rank significance to the most efficient direction of capital investment, which will assure an increase in productive capacities at minimum expense, and an increase in the output of industrial products in the shortest period of time, accompanied by a sharp increase in labor productivity and reduction in the cost of production.

With the objective of gaining the maximum amount of time in the economic competition with the world capitalist system, the major direction in certain branches of industry during the seven-year plan will be basic reconstruction, expansion and technological reequipment of existing enterprises, based on the complex mechanization and automation and introduction of progressive technology. Thus, for example, 67% of the investment in the iron and steel industry and about 60% of the investment in the non-ferrous metals industry will go to expansion and reconstruction of existing enterprises, whose function would be to yield more than three quarters of the planned increase in pig iron, steel and rolled metal. A clear example of efficient utilization of capital investments is the Magnitogorsk Combine. The output of rolled metal at this combine will rise from 5.2 to 8.5 million tons per year in the seven-year period.

An important source of increase in the efficiency of capital investments must be the significant improvement in the share of expenditures upon equipment and machinery within the total volume of capital investments, and a corresponding reduction in the share of expenditures for construction of buildings and structures.

In this connection, data on the structure of capital investments in the industry of the USA will be of interest. According to the latest censuses of industry (1947-1954), the share of buildings and structures in capital expenditures in American manufacturing industry is 30-35%, while investments in machinery and equipment are 65 to 70%.

These ratios are characteristic of all the decisive branches of American industry. In 1954, the share of expenditures upon machinery and equipment in the total sum of capital expenditures came to: 76% in the machinery-manufacturing industry, 71% in ferrous and non-ferrous metallurgy, 75% in the chemical industry, and 76% in the paper and pulp industry. In the USSR, the cost of buildings and structures is 50% higher than in the USA as a ratio of the total cost of industrial objects. "An increase in the share of expenditures upon equipment," Comrade Kosygin observed in his speech at the 21st Congress of the Communist Party of the Soviet Union, "would increase the efficiency of capital investments in industrial construction and would substantially speed the rates of capital construction." A most important factor in reducing the cost of construction and direction and, consequently, of increasing the share of the cost of machinery and equipment in the total cost of new projects being turned over for production is the further industrialization of construction processes, the large-scale utilization of progressive construction materials which will have the effect of converting building sites to the locale of assembly of large construction blocks prepared at specialized factories. This will be an important factor in increasing the productivity of labor and reducing the cost of construction work.

The grandiose objectives of the seven-year plan inspire the personnel of industry to creative labor for the purpose of developing the material and technological basis of communism. "Ahead of us," stated Comrade N. S. Khrushchev at the 21st Congress of the CPSU, "is a clear and noble objective. We've got to work well to attain that objective. Such work ennobles man and brings him satisfaction and happiness."

N. G. Grachev

The Statistical Study of Specialization and Subcontracting in Industry

The Communist Party and the Soviet government have paid and are paying much attention to specialization and subcontracting in industry. The seven-year plan for development of the national economy of the USSR in 1959-1965 envisages a further substantial development of specialization and subcontracting in industry, and in particular the further integrated development of the economic districts with consideration for the need for specialization of enterprises and improvement of subcontracting, and elimination of irrational cross hauls. Realization of these measures in the present seven-year plan will significantly improve the productivity of labor in industry.

The rising role of specialization and subcontracting under today's conditions will pose new and important problems to economists and statisticians. The development of methods of statistical investigation of processes of specialization and subcontracting in industry, utilizing specially elaborated, and economically validated systems of statistical indices would be of considerable significance. It would have the objectives of: a. studying the development of specialization and subcontracting in the USSR, in the lands of peoples' democracy, and in certain capitalist countries; b. a statistical characterization of the condition of and changes in the levels of development of specialization and subcontracting in various branches of industry, primarily the manufacture of machinery, during specific periods of time; c. determination of the economic efficiency of specialization and cooperation by defining the level of influence of these forms of organization of production upon the major technical and economic indices of operation of enterprises (labor productivity, cost of production, profitability, etc.), which create the possibility of determining the optimum levels of specialization of production; d. defining the influence of specialization upon the scale of industrial enterprises and departments; e. systematic verification of fulfillment of plans for specialization of production and plants for subcontracted delivery of products by the industrial enterprises under the national economic councils.

In order properly to reflect the economic essence of specialization in the system of statistical indices, it is necessary to define the peculiarities of forms and types of specialization of production at various stages in the development of socialist industry as a whole, and of its individual branches. As we know, specialization has the following three major forms: product, or commodity specialization; part, or assembly specialization; and technological, or stage, specialization. Before proceeding to a characterization of the forms and methods of statistical study of specialization (in particular, a characterization of the system of statistical indices), it is necessary to pause to consider the content and the major characteristics of specialized production.

A significant feature of specialization is the mass production of technologically homogeneous products, making possible the use of high-output equipment and a substantial increase in labor productivity. Moreover, in an industry that, as a rule, produces a variety of products, i.e., the machinery manufacturing industry, superior utilization of production equipment is brought about by concentration of specialized production of particular homogeneous groups of products, as identified by various characteristics (weight, identical material employed, etc.). Consequently, specialized production is characterized, in the first place, by a homogeneous composition of groups of products of various shops or enterprises as a whole, and, in the second place, by a high concentration of mass production of identical products in the enterprise as a whole, and by concentration of production of products having mass usage (metal-working tools, general-purpose metalware, electrodes, etc.), at a small number of enterprises. The plan for development of the USSR national economy in 1959-1965 projects, for example, a further development of the supply base of the machinery-manufacturing industry both by expansion of specialization and reconstruction of existing enterprises, and by the construction of 75 or 80 large new specialized departments and plants for producing castings, forgings and stampings, with the following specialized capacities to be obtained by 1965: 14,700,000 tons of iron castings, 4 million tons of steel castings, 1,600,000 tons of forgings, and 3,800,000 tons of stampings. The capacity of specialized plants for the production of casting equipment will be multiplied more than four-fold. In the automotive, the tractor, the agricultural machinery, the highway construction equipment and in heavy industries, it is planned to carry out a desirable level of concentration of production of identical products in a minimum number of plants, and to organize centralized manufacture of standard assemblies, subassemblies and parts, by the methods of mass, large-scale serial production.

Thus, the processes of specialization and concentration of production in industry are intimately interrelated. At the same time, intensive development of specialization in socialist industry poses anew the problem of concentration of production and the economic efficiency of large, medium, and small enterprises.

In connection with the reorganization of the administration of industry, extensive possibilities for specialization of various enterprises in the manufacture of identical products, with simultaneous expansion of production at these enterprises without installation of additional equipment and without increasing the number of workers, made their appearance. Under these conditions, even a small, but specialized enterprise, if it produces a large quantity of homogeneous items, has a number of advantages characteristic of large-scale production, particularly due to the extensive division of labor and the utilization of specialized and high-output equipment.

Therefore it is necessary to bear in mind that the advantages of large-scale production are determined, in the present day, not only by the overall scale of the production put out by an enterprise (the total volume of production, the number of workers, etc.), so much as by the scale of production of identical products. The presence of high-output specialized equipment, and a high level of specialization of enterprises and of their various departments, make possible a more complete utilization of equipment by reduction

of the number of times that equipment has to be adjusted, set, etc.

However, in the economic statistical study of processes of concentration and specialization of production, attention is usually not given to the degree of specialization of enterprises on homogeneous production, or to the interrelationship among processes of concentration and specialization. Thus, in defining the groups by means of which statistical expression is given to the interrelationship among the level of concentration of production and the level of operation of an enterprise, the basic sign of groupings of enterprises by scale is usually in terms of the total number of workers, the gross value of output, or the gross cost of the basic investment for purposes of production, etc.; these indices are used to determine the share of various types of enterprises in the total, including the very largest in the given branch of industry. However, such a grouping should certainly be supplemented by statistical data characterizing the level and proportion of specialized production in the total volume of the output of the given group of enterprises. This is particularly important in studying the concentration of production in branches of industry and enterprises producing a variety of products (for example, in the machinery-manufacturing industry).

The study of the complex processes of specialization of production assumes the utilization of a specific system of statistical indices. This system should characterize the special features and degree of development of specialization of production of industry as a whole, of the various economic administrative districts, and of the various branches of industry (with consideration for the special features of their economies and technologies), and of individual industrial enterprises and particular departments.

The division of labor in society as a whole gives rise to the appearance of new branches of industry, that is, to specialization of its branches. V. I. Lenin noted that the process of specialization "separates various types of processing of products, creating an ever-greater number of branches of industry..."[1]

Consequently, the general concept of the developing process of specialization of production itself presents a picture of the dynamics of a number of branches of industry. Most characteristic for development of production is the growth of the number of branches of machinery manufacture and metal processing, this being explained by the special features of the technological process, and the organization of production in these branches of industry (great variety of composition of products, the appearance of new types of machines and their component parts: assemblies, parts). Thus, in the USSR in 1958 there were 202 branches of industry as against 172 in 1944 and 169 in 1936, while the respective numbers for the machinery manufacturing and metal working industries were 47-42 and 40.[2]

Further, the following three indices of dynamics of the proportion of a given industry to the whole pertain to the matter of specialization of industry: a. the production of given branches of industry in total volume of industrial output; b. the production of the machinery-manufacturing and metal-working industries in the total of industrial production; c. the production of particular branches of the machinery-manufacturing industry in the over-all total of machinery production. These indices reflect the process of specialization more precisely, as they are calculated on the basis of the share of production constituting the result of the productive activity of the branches of industry.

However, the indices of the dynamics both of the number of branches, and of the share of their production are excessively general and inadequate for a profound study of specialization. In this connection, the necessity arises for statistical indices that characterize specialization of economic administrative districts and of individual enterprises.

The statistical indices of specialization of industrial production of an economic administrative district include: a. indices of the share of the production of individual branches of industry (with the machinery manufacture and metal working considered separately) in the total volume of production in the industry of the district, as well as in the corresponding totals for the USSR as a whole; these indices permitting characterization of the distribution and specialization of industrial production; b. indices of the share of production and consumption of products of the machinery-manufacturing industry and of the number of the most important types of products of the metal-working industry in the given district (in the district-wide balance); these indices characterizing possibilities for subcontracting of industry within and without a given district; c. indices of the share of and description of the production activity of various groups of machinery manufacturing and metal working enterprises of a given district, defined by the type and degree of specialization.

In grouping enterprises by forms of specialization, the following groups of enterprises are capable of approximate definition. They specialize in 1. manufacture of finished machines and equipment; 2. production of individual assemblies and sub-assemblies; 3. production of individual parts; 4. execution of specific technological processes.

This grouping permits a comparative description of the levels of specialization of each group of enterprises to be made, as well as a characterization of the degree of development of one or another type of specialization.

The grouping of enterprises by the degree of specialization can be quite varied. Thus, for example, enterprises may be grouped by the number of types and sizes of products they manufacture (homogeneous and heterogeneous). More exactly, the degree of specialization may be reflected in the grouping of enterprises by the share of the total production represented by the major product in the total volume of production of the given enterprise.[3]

In intimate relation with the foregoing indices, are indices of specialization of production in a given branch of machine building, as a totality of the basic, specialized enterprise in the given branch (independent of administrative subordination) or in the machinery-manufacturing industry as a whole. Here the following indices are included: a. the level and dynamics of the share of the specialized branch in terms of the relationship of its major product to the total output of the given category of product (i.e., steel castings, produced by this branch of industry in percentage of the total production thereof in the USSR as a whole); b. the dynamics of the share of the basic production in the gross production of the given branch (i.e., the share of tools in the total output of the tool-making industry).

Indices of specialization of production of an individual

(1) V. I. Lenin, Collected Works (Russian Edition), Volume 3, p. 16.

(2) The number of branches in the respective years are determined in accordance with the new classification of branches of industry adopted in 1958, and only grouped divisions are considered (in accordance with a three-index classification of code).

(3) By basic production here and hereafter we refer to the products corresponding to fundamental purpose, and specialization of the given enterprise.

industrial enterprise include: 1. the share of the basic products in the total production for the given period; 2. the share and quantity of identical types, grades, and sizes and shapes of products in the over-all composition (i.e., the share of standardized, uniform and normalized assemblies, parts, etc.).

The most important of these indices is the first inasmuch as it is production, of course, which is the resultative index of the productive activity either of an individual enterprise or of industry as a whole. Sometimes, this index is called the coefficient of specialization. However, as it applies to individual branches of the machinery-manufacturing industry, even both these indices may be inadequate for a complete description of the level and efficiency of specialization. Thus, for example, in describing the specialization of the automotive industry, product by product, it is impossible to limit oneself to an index of the share of the basic products in the over-all total of the products, inasmuch as this basic product would be equal to or would approximate 100%. It is impossible to limit the index to its share in the total production, as an index with equal to or approximating 100%, and the increasing degree of specialization of production in the given branch proceeds both along the lines of specialization of enterprises in the production of one or two types of autos or trucks, of particular models, or of machines of specific load capacity.

Characterization of the level of departmental specialization may be done by the following indices: 1. the share of the departments specializing in individual items and the share of departments specializing in particular manufacturing processes; in this connection it is obvious, that the greater the share of products produced by departments specializing in individual items, the greater the level of specialization within the enterprise; 2. the share of production lines and shops producing particular objects in the basic departments; 3. the various indirect indices of level of specialization, i.e., indices of degree of the utilization of high-output technological processes, characteristic of specialized types of production. In turn, these indirect indices are divided by the nature of their application, to the universal ones, utilized in types of production not having a strictly limited list of products, and the specialized type which applies to enterprises producing particular types of output. Further, the number of special indices of specialization of production must reflect the co-efficient of mass output sometimes employed, which is characterized by the average number of different production operations per unit of productive equipment or per work station. Finally, the level of departmental specialization of production may be characterized by the composition of the equipment employed.

The statistical study of specialization of production may be carried out in the following two intimately-interrelated directions: a. in the direction of characterization of the levels of specialization and their dynamics, the fulfillment of a plan by specialization, and also the distribution of the specialized production of various types of products; and b. in the direction of determining the efficiency of specialization of production.

The major objective of the first of these trends is analysis of the fulfillment of the plan of specialization of production and distribution of specialized production of a given product by branch of industry, by plants in national economic councils and local government-owned industry, and by particular economic districts (with separate listing of production of this product for the given economic district and for others).

The major objectives in the second direction are determination of the profitability of operation of industrial enterprises at a given level of specialization of production, and under a given form of organization of subcontracting, as well as determination of the desirability of specialization of one or another type of production within the limits of the given economic district.

Let us pause to consider the methods of evaluating the fulfillment of the annual plans of specialization of production by separate branches of the machinery-manufacturing industry of the national economic councils, as the other questions do not present any difficulties in terms of method.

The fundamental indices of fulfillment of these plans are, in our opinion, the indices of: a. increase in proportion of the basic product (corresponding to the specialization of the given enterprise) in the total value of production by this enterprise (in percentage) and b. the effectiveness of introduction of specialization of production. The method of measurement, consequently, includes methods of calculating indices of average weighted planned and factual levels of specialization (the value of the basic product serving to weight the total), and generalizing indices of the efficiency of specialization, as well as comparisons thereof. These indices should, in our opinion, include in the first place, the following: 1. the labor requirement for identical types of products, pertaining to the basic production of this plant; 2. increase in the productivity of labor of workers in the basic departments of the enterprise, primarily of workers producing the basic products (corresponding to the specialization of the department or the enterprise as a whole).

If we possess data on the degree of specialization of production by individual enterprises, it is possible to calculate the corresponding indices, for all the enterprises of the given branch of the machinery-manufacturing industry by comparing the percentage of specialization provided for in the plan, and that actually attained. In order to obtain general, total characterizations of the state of specialization of production in any given branch of the machinery-manufacturing industry, it is possible, on the basis of factory-wide data, to group enterprises in terms of the actual specialization of production achieved.

An important task in the second trend in statistical study is determination of the efficiency of specialization of production.

The total indices of efficiency of specialization of production in a given branch of industry may be calculated by the index method on the basis of the planned and actual levels of labor required for an identical volume and composition of production.

Even more effective is utilization of the method of grouping toward this end. Let us present the grouping, shown on the following page, plotted on the basis of the data in form Number 8 of the annual reports for 1957 of 110 machinery-manufacturing enterprises.[4]

We see from the table that about one half of the enterprises (45.5%), included in the grouping, attained a level of 90% specialization or higher, these being the largest enterprises both in terms of numbers of workers (69.1%) and in gross production (72.7%). The data presented also show that as the degree of specialization rises, gross average annual production per worker on payroll also undergoes a

(4) It is to be observed that in the enterprises, the differentiation made between basic and non-basic products was not sufficiently accurate in the filling of Form Number 8 of the annual report for 1957. This resulted in an exaggeration of the share of the basic production in the grouping of enterprises.

Grouping of Enterprises by Percentage of Basic Production	Enterprises		Gross Production in 1957 (in prices of July 1, 1955; percentage of total)	Annual Average Workers on Payroll (as percentage of total)	Average Annual Gross Production per Worker on Payroll (as percentage of group I)
	Number	Percentage of total			
I. 50 and Under	3	2.7	0.4	0.5	100.0
II. 50- 74.9	30	27.3	16.4	19.8	107.4
III. 75- 89.9	27	24.5	10.5	10.6	128.5
IV. 90- 94.9	24	21.8	46.0	43.8	135.6
V. 95-100	26	23.7	26.7	25.3	136.7
Total	110	100.0	100.0	100.0	--

systematic increase. Thus, if the average production by a single worker at plants in Group I be taken as 100%, we find that in the remaining groups of plants, the production was: 107.4% in Group II, 128.5% in Group III, 135.6% in Group IV, and 136.7% in Group V.

It will be understood that the nature of these relationships is to be explained not only by the rise in specialization but also by the advantages of large-scale production. These factors are intimately interrelated, inasmuch as a characteristic feature of specialization in industry is concentrated mass mechanized production of technologically homogeneous products. However, it should be observed that in the plants in Group V, the factor of specialization had a greater influence, inasmuch as at lower levels of average indices of gross production and numbers of industrial workers (calculated per enterprise), production per worker was higher than in Group IV, where the percentage of specialization of production was lower.

In order to demonstrate the intimate connection between factors of specialization and concentration of industrial production, let us present the following grouping of the same 110 machinery-manufacturing enterprises:

Groups of Enterprises by Gross Production in 1957, Millions of Rubles	Number	Percent of total	Gross Production in 1957 (prices of July 1, 1955; percent of total)	Percentage of Basic Production to Total Value of Gross Production	Average Annual Number of Workers on Payroll (percentage of total)	Average Annual gross Production per Worker on Payroll (as percent of Group I)
I. Ten and less	37	33.6	3.5	74.0	4.3	100.0
II. 10-19.9	22	20.0	6.2	82.1	6.7	115.6
III. 20-49.9	26	23.7	14.4	88.1	14.4	125.8
IV. 50-90.9	15	13.6	22.9	84.4	24.0	120.0
V. 100 and More	10	9.1	53.0	92.0	50.6	131.4
Total	110	100.0	100.0	--	100.0	--

As is evident from the data in this table, an increase in the scale of the enterprises is accompanied by an increase in the level of specialization of production, and simultaneously there is an increase in labor productivity in the identical degree (that is, in the average output per industrial worker). In Group IV where, despite the greater size of the enterprises than in Group III, the percentage of specialization is somewhat lower (not over 84.4%), there is a decline in approximately the same degree in the average output per worker; consequently, in this case also, the factor of level of specialization of production has a greater effect upon the level of labor productivity than does the factor of concentration of production.

The two groupings made above permit the following conclusions to be drawn. For purposes of general characterization of the levels and efficiencies of specialization of production, it is possible in the future as well, to employ the statistical data of Form Number 8 of the Annual Report, on the condition: a. that it be supplemented by data on the cost of the major forms of basic production; b. that there be a more exact and accurate delineation between fundamental production (corresponding to the purposes for which the plant was planned) and non-basic production; c. that there be a more precise and elaborated definition in the instructions for filling out the annual report of the enterprise. However, any significant expansion of Form Number 8 of the Annual Report is undesirable, as it would result in excessive paper work. Moreover, even significant supplementations and expansions of this form would not make for a profound study of specialization. What this does require is the organization of periodic selective investigations of machinery-manufacturing enterprises over an extensive area of study (approximately once every two years).

The experience gained in these investigations should result in: a. determination of the most significant indices o

specialization, which should subsequently be introduced into the scope of the annual statistical reports to the government; b. there should be developed a system of statistical indices of specialization in production, applicable primarily to the machinery-manufacturing branches of industry. However, one of the most important conditions for the study of the economic efficiency of specialization of production is the development of classifications of machines, as well as of parts and assemblies in accordance with their homogeneity in terms of design and production engineering. This would expand the possibilities for utilization of standardized parts, assemblies, and sub-assemblies. Such classifications would make it possible to improve the planning and distribution of specialized production, and would also aid in a more profound study of the specialization thereof.

Subcontracting is intimately related with specialization of production. In view of the fact that the economic literature sometimes presents inaccurate definitions of the scope of subcontracted products, it should be emphasized that subcontracting for purposes of production requires the organization of long-term planned production relationships among industrial enterprises and branches of industry in the production of all complex products called for by the plan. This involves products consisting of large numbers of parts, semi-finished items, assemblies, sub-assemblies and other products required to finish a particular item. These are made by the supplying enterprises and are shipped to the consuming enterprise in accordance with contract.

In view of the fact that subcontracting expresses necessary ties in production conditioned by the specialization of production and is intimately related to the latter, the forms and types of subcontracting are similar to some degree, and analogous to the forms and types of specializations. From this there arises the need to develop corresponding statistical indices expressing the level of subcontracting.

Thus, the level of subcontracting at various enterprises is calculated on the basis of the following indices: a. the number and territorial distribution of specialized supplying enterprises (subcontractors), cooperating with the given enterprise; b. the number and assortment of types of products obtained outside (forgings, stampings, parts, etc.), characterizing the list of objects to which subcontracting applies; c. the percentage of forgings, parts, assemblies, etc. obtained elsewhere to the total requirements of the enterprise, demonstrating the volume of subcontracting in kind; d. the share of products obtained outside the plant by subcontracting in terms of the cost of the finished product of the given enterprise, providing a monetary expression for the volume of subcontracting. This last index is sometimes termed the subcontracting coefficient.

The level of subcontracting in the production of the machinery-manufacturing industry within the economic administrative districts is expressed by the following indices: the composition and quantity of subcontracted deliveries (by type of product) in the enterprises of the given economic district; the composition and quantity the subcontracted deliveries outside the bounds of the given economic district (by types of product and length of shipment, in percentage to the total production of this type of product in the given economic district) and from other economic districts (as a percentage of the total consumption of this type of product in the given economic district); the difference between shipment to other districts and shipment from other districts and, finally, indices of fulfillment of the plan of subcontracted deliveries in the various national economic councils. Thus, the shipment of products out and in, in certain economic administrative districts in 1957, is characterized by the following data (in tons):

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	Iron castings		Forgings	
	Shipped out of district	Shipped into district	Shipped out of district	Shipped into district
RSFSR				
Altai	10,858	11,498	10	12,496
Bryansk	1,632	8,060	899	386
Voronezh	2,442	7,659	181	1,994
Kuibyshev	12,140	11,783	83	2,218
Leningrad	21,014	25,282	26,828	4,209
Orenburg	3,196	2,075	5,751	2,072
Sverdlovsk	17,016	13,578	37,196	20,229
Yaroslavl	5,321	13,508	2	2,746
Ukrainian SSR				
Vinnitsa	1,713	1,438	—	—
Dnepropetrovsk	5,744	11,637	670	12,575
Stalino	16,381	19,294	15,136	7,644

The data in these tables show that there were considerable cross hauls in most of these economic districts in 1957, particularly of iron castings. This is explained in part by the existence of the old ties in production among enterprises that had come into being prior to the reorganization of the management of industry and existing for a substantial period after reorganization as well. A significant role in these shortcomings was also played by other causes, as is testified to by the following data on fulfillment of the annual plan for subcontracted deliveries of iron castings in the same economic administrative districts in 1957 (in percentages).

While the plan for subcontracted deliveries for all national economic councils was 99.6% fulfilled in 1957, the over-all plan for deliveries in individual national economic councils (including those presented in the table) was

	Total	Type of Subcontracting		
		intra-district	inter-district	intra-republic
RSFSR				
Altai	101	102	103	99.9
Bryansk	111	116	107	100.1
Voronezh	110	107	133	105.0
Kuibyshev	99.5	99	102	85.0
Leningrad	104	106	101	94.0
Orenburg	92	4.7	90	100.0
Sverdlovsk	104	96	112	100.3
Yaroslavl	92	84	94	89.0
Ukrainian SSR				
Vinnitsa	102	100	107	101.0
Dnepropetrovsk	98	190	98	88.0
Stalino	79	136	53	74.0

fulfilled unevenly from 79 to 111%. Even greater fluctuations existed in fulfillment of the plan in accordance with intra-district, inter-district and inter-republic subcontracting. In the majority of national economic councils, fulfillment of plans for inter-republic subcontracting was less successful and that for intra-district subcontracting was more successful. This testifies to the presence of localist tendencies in some national economic councils, which concern themselves primarily with fulfillment of the plans for deliveries covered by intra-district subcontracts. Failure to fulfill plans and assignments for deliveries of products to other economic districts or constituent republics, as well as for the needs of the USSR as a whole, constitutes a crude violation of government discipline.

A more profound and systematic study of subcontracting by enterprises requires the following, in our opinion: a. special selective studies of subcontracted deliveries should be made in addition to utilization of the monthly reports to the government for this purpose; b. indices of specialization of production and subcontracting industry should be related in the programs for annual statistical reports, as well as for special selective investigations, and should constitute a unified system; c. there should be a gradual expansion of the scope of the types of subcontracted deliveries of parts, semi-finished products, assemblies, sub-assemblies and other parts needed to complete products, embraced by government statistics.

Currently, a new procedure for compilation of plans for subcontracted deliveries and for checking up on their fulfillment has been adopted.

In this connection, the statistical reports to the government on fulfillment of plans of subcontracted deliveries have been reorganized. Beginning with April, 1958, the reports on such shipments have to be broken down not only territorially, but also in accordance with the fulfillment of the following plans: a. inter-republic, b. inter-district, and c. intra-district deliveries (in the case of constituent republics, constituting only a single national economic council, the reports need be made only in accordance with two plans: the inter-republic and the intra-district).

Each national economic council reports to each shipping enterprise the plans for inter-republic, inter-district, and intra-district deliveries. Total monthly and quarterly reports are elaborated in terms of four types of products: iron castings (including malleable cast iron castings); shaped steel castings; and forgings (including forgings made from ingots), and stampings.

This procedure for compilation of plans, and for checking on their fulfillment makes possible a more complete delivery to enterprises of subcontracted shipments and organization of a more precise category-by-category accounting of the fulfillment of each plan. This permits current solution of problems of the fullest possible utilization of the enormous resources available in further division of social labor under socialism and the constant increasing of their productivity.

The decisions of the 21st Congress of the Communist Party of the Soviet Union have posed new problems for more profound study of the Soviet economy, and for generalization of the practical experience of the upbuilding of communism before Soviet economists. This is true particularly in the field of studying the processes of specialization and subcontracting in industry. Soviet economists and statisticians should develop a broad and economically valid system of indices and methods permitting prompt revelation of shortcomings and of unutilized reserves in the field of specialization and cooperation of socialist industry.

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Technical Re-equipment of Railway Transportation and Problems of Economic Efficiency

In accordance with the enormous development of the country's productive forces, the growth in inter-district and intra-district production ties, and the expansion of foreign trade projected for the current seven-year plan, the further improvement of the functioning of transport takes on substantial importance. The target figures for the development of the national economy of the USSR in 1959-1965, confirmed by the 21st Congress of the Communist Party of the Soviet Union, envisaged a 39-43% increase in the freight turnover of railway transport.

The rising strains of freight will only be able to be handled if there is a fundamental technological reconstruction of railway transport. The main trend in this reconstruction is the extensive introduction of electric and diesel power on the railroads. Electric power already handles 15.8% of the freight turnover, and diesel power 10.2% in 1958.

High rates of introduction of electric and diesel power on the USSR railroads in the past four years (1955-1958) made it possible to increase the traffic capacity of a number of the most important heavily-burdened lines, to eliminate interruptions in delivery that had existed on these lines when steam haulage was used, and to save 45,200 tons of standard fuel units and 12,600,000,000 rubles by reduction in cost of haulage.

In the USSR the introduction of electrical and diesel power on the railroads is being carried out at more rapid rates than in a number of capitalist countries. In the course of three years of the sixth five-year plan, the annual rise in freight turnover handled by the new types of power was 6.3%; while the annual increase in freight turnover on the railways of the United States of America during the years of introduction of diesel engines, was 4.6%. In this connection, it should be borne in mind that half the railway lines of the USSR converted to new types of power have been converted to electric power, which is a more difficult and costly measure than introduction of diesel power.

The increase in electrified lines in the USSR in 1957-1958 was 21.3% of the total length of electrified lines in the country. During the same years, the increase in the world length of electrified lines was only 6.5%.

The need for rapid rates of development of new types of transport on the USSR railways is due to the rapid increase in freight density on the various lines. On the other hand, the fuel and power resources of our country, and the foundation for electric and diesel engine construction in material technology create the necessary prerequisites for rapid reconstruction of haulage on the railways.

The idea of utilization of electric and diesel haulage on our railroads was advanced by V. I. Lenin, who as long ago as the period of establishment of Soviet power in liquidation of economic chaos properly evaluated the high efficiency of the new types of haulage and their long-range significance for the railroads of our country.

The beginning of reconstruction of railway transport, and particularly of the introduction of electric haulage, was envisaged in the Leninist GOELRO Plan, which turned our country's aim toward all-out electrification. Lenin related the reorganization of industry, of agriculture and transport directly to electrification of the country.

Our country is the birthplace of diesel power in railway transport. The decision to build the first main-line diesel engines, which emphasize the particular importance of introduction of diesel traction on the railways of the USSR, was taken at the initiative of V. I. Lenin.

The intensive installation of electric and diesel traction on the railroads of the USSR in the next few years requires solution of the problem of the economic efficiency of each type of traction.

In comparing the new, progressive types of traction — electrical and diesel — one must not counterpose them to each other. Both types are highly economical. There can be no doubt that both are more progressive than steam traction. The problem is to define the economic efficiency of the various types of traction under specific conditions of operation depending upon the nature of the right-of-way, volume of freight turnover, conditions of fuel and electricity supply, etc.

Electrical and diesel traction provide high efficiency, an increase in the traffic capacity of railroads and the work done per locomotive, an easing of the labor of the railway workers, a more consistent functioning of the railways under all conditions of climate and season, an enormous saving of fuel for the national economy, and a pronounced reduction in operating expenditures. Therefore, in the decisions of the 21st Congress of the CPSU, the problem of basic reconstruction of railway transportation is linked with an introduction of new types of traction on a scale unprecedented in world experience. In 1965, 85-87% of the total freight turnover of the railroads will be performed by electric and diesel locomotives. At the end of the seven-year plan, electric locomotives will be operating on lines of a total of 29,400 kilometers length and will perform 45-46% of the freight haulage of the country, while diesel engines will function on lines of 70,600 kilometers length and will haul 40-41% of the total freight. Only secondary lines, carrying 13-15% of the total freight turnover, will continue to use steam traction.

The introduction of new types of traction in 1959-1965 will yield enormous economies in fuel (270-275 million tons of standard fuel units), will result in a reduction in operating expenditures (45-47 billion rubles), and will almost double the traffic capacity of the railroads, will speed delivery of shipments to consumers, and will raise labor productivity by approximately 17-20%. Thus, the new forms of traction will make it possible to resolve major technological and economic problems of transport. The capital expenditures involved in introduction of the new forms of traction, including expenditures upon the manufacture of the locomotive, will be amortized rapidly. Introduction of the new forms of traction will permit a significant

improvement in the fuel balance of the country by expanding utilization of local types of fuels and natural gas at power plants, and of liquid fuels in diesel engines. The percentage of the electrical energy of the country consumed by the railways will rise from 4.6% to 8%, and the share of diesel fuel thus used will rise from 4.6% to 14.3% of its total national consumption.

Each form of traction has its advantages and disadvantages. Modern diesel engines with electrical drive are actually electric locomotives carrying their own power plants. Their advantage lies in their maneuverability and independence of a contact circuit and substations, and in the speed and relative cheapness of installation of such systems. They are capable of being shifted readily from one railway to another and of functioning as mobile power plants. In addition, diesel engines are the most efficient types of locomotives for yard use.

The introduction of diesel engines will release for other uses a greater amount of electricity produced at power plants than will electrical engines. For example, 5,000 diesels with a capacity of 3,000 kw each have a total installed capacity of 15 million kw. The operation of an equal number of electric engines of the same power would require 8 million kw installed at centralized power plants (with consideration of losses in transmission lines, substations, and the contact circuits).

At the same time, we know that electric traction has a number of significant advantages over diesel traction. The electrification of train traction facilitates electrification of the transport system as a whole. Upon introduction of electrical traction, it is possible to mechanize and automate processes requiring heavy labor in transport. At the same time, industrial and agricultural enterprises along the railroad contract circuits can be electrified on a larger scale.

The traction substations of electrified railways provide power to local consumers outside the field of traction. At present, the local usage of transport substations for nonrailway purposes is 30% of their capacity, and in some cases as much as 50%. Major possibilities for electrification of districts adjacent to the railroads are opened up in connection with extensive introduction of electrical traction employing AC current, as this makes it possible to supply consumers along the railroads directly from the contact circuit. The power thus taken off may be from two to four thousand kw along each supply subsection (40-60 kilometers). This makes it possible to provide cheap electricity to midway stations, to electrify work on current maintenance and repair of right-of-way, etc., of the districts adjacent to the electrified main lines.

Introduction of electrical traction will facilitate an increase in the transit capacity of the line and will speed delivery of freight. Diesel engines do not yield an increase in speed over high-power steam engines, while traffic capacity with diesel engines is frequently even less than with steam engines. Transit capacity with diesel engines is relatively higher than traffic capacity, because of the higher weights of trains. Nevertheless, the need to increase the traffic capacity of the line is one of the most important problems before railway transport. In the lines with electric traction, the operating indices are higher. Electric traction is particularly effective in suburban traffic in which there is a high concentration of passenger flow. It permits handling of large numbers of passengers, speed, inexpensive service, and pleasant conditions for the passengers.

Electrification of transport reduces haulage of fuel and eliminates the need to store it. The supply of electrical energy from hydroelectric stations and powerful thermal stations with high steam parameters to the railroads raises the average efficiency of electric locomotive traction on lines with mixed electricity supply to 22-26%, as against 15-18% when the electric power comes from existing thermal electric power plants. The efficiency of electric locomotive traction from hydroelectric stations is 55-60%, as against 26-28% for diesel engines.

Many indices show electrified railroads to be more effective in operation than those converted to diesel traction. However, it would be inaccurate to counterpose these two progressive forms of traction. Electrification of the railroads requires major capital investments in the construction of power plants and trolley systems. Proceeding from the need to gain time in attaining high technical and economic indices of railway operation, the seven-year plan envisages harmonious development of both progressive types of traction, with first priority to electrification of lines and divisions with high freight density and difficult right-of-way, which is where electrified traction yields the greatest results. Diesel engines will be introduced most intensely in the remaining types of lines.

In the long run, the sphere of application of electric traction to railway transportation will be expanded. Considerable possibilities exist for reduction of capital expenditures upon electrification of railroads, both with direct and with alternating current. In addition, the cost of haulage with electric traction is reduced by the utilization of large-capacity power plants producing cheap energy.

The introduction of the new types of traction requires different levels of capital investment in railway transport and in industry (petroleum, electric power, coal, transport equipment manufacture). Thus, in accordance with calculations made at the Institute of Complex Transport Problems of the USSR Academy of Sciences, the scale of capital investment when a single-track line having a right-of-way of average difficulty and a freight density of 10 million ton-kilometers per kilometer in freight traffic will be as follows, on conversion to a new type of traction (in thousands of rubles per kilometer of railway line):

Type of locomotive	Capital investment in railway transport including locomotive costs	Total expenditures including costs of developing industry
N-8 electric	466	695
VL 23-electric	467	705
VL-22m electric	470	725
TE-3 diesel	175	314

The operation of progressive forms of transport in railway transport, particularly on lines with difficult rights-of-way and large volumes of work, makes possible a pronounced reduction in cost of transport. The reduction in the cost of haulage as a result of introduction of new types of traction and the use of new types of locomotives, assuming the price of electric power to be 9 kopeks per kilowatt hour, that of diesel fuel to be 260 rubles and that of coal to be 250 rubles per ton of standard fuel units, is shown on the following page (in percent).

The period required for amortization of capital investments in electric traction varies from two to eight years

	Types of locomotive	Single-track lines		Double-track lines	
		Reduction in expenditures depending upon type of traction	Reduction in total cost	Reduction in expenditures depending upon type of traction	Reduction in total cost
Electric traction compared to steam	VL-22m compared to FD	30-60	9-34	55-62	26-40
Diesel traction compared to steam	TE-2 compared to L	40-45	13-22	40-45	21-23
	TE-3 compared to FD	55-60	18-34	54-58	28-38
Electric traction compared to diesel under heavy freight conditions	VL-23 compared to TE-3	10	5	25	13
	N-8 compared to TE-3	25	9	30	16

depending upon difficulty of right-of-way, density of traffic, differences in prices of fuel and electrical energy. The time required for amortization of capital investments on lines with high freight density is from one to three years. When electric traction is used in mountain areas, for example in areas with an average grade of 12 thousandths, the total cost is reduced by 34% on single track and by 40% on double track lines, and the time required to amortize the capital investments fluctuates from one year to 18 months. Electric traction provides higher transit and particularly higher traffic capacities in mountain and high-freight density lines due to the increase in the weight and speeds of train movement, particularly by utilization of short-time overloads of electric engines.

Investigations conducted in the Institute of Complex Transport Problems of the USSR Academy of Sciences show that, on a single-track line with a right-of-way of average difficulty, and a freight density of 10 million ton-kilometers per kilometer, the VL-23 electric engine in freight service reveals operating indices superior to those of the TE-3 diesel engine, as follows: 30% better in running speed, 27% better in point-to-point speed, 53% better in traffic capacity, 21% better in transit capacity, and 18% better in annual utilization per locomotive. Under various conditions of operation, substitution of electric transit (VL-22m locomotive) for steam traction (FD steam engine) on a one-track line permits a 38-55% increase in train weight, a 10-30% increase in point-to-point speed, a 15-17% increase in traffic capacity, a 60-82% increase in transit capacity, a 40-50% increase in average daily run of locomotive, and a 100-150% increase in work per locomotive. This permits a 50-60% reduction in the pool of locomotives, and approximately a 70-75% reduction in fuel consumption at fuel-powered electric power stations, over the fuel needed to operate steam engines. The efficiency indices for electric traction are even higher on two-track lines.

When diesel traction (TE-3 diesel engine) is substituted for steam (FD steam engine), train weight may be increased by 85-90%, point-to-point speed rises by 1-10%, transit capacity by 55-75%, average daily run by 2-20%, and utilization of the locomotive by 100-130%. In this situation, the number of engines needed also is reduced. However, in view of the reduction in actual running speed of train movement, the traffic capacity of the line is reduced by 10-15%. However, the cost of haulage is cut by 55-60%, depending upon the type of traction, and total costs by 18-34%. The total cost is reduced by 28-38%, on two-track lines. The use of a three-section TE-3 diesel or a two-section TE-11 diesel makes possible a further reduction of 2-5% in cost depending upon the increase in speed of movement and weight of the frame.

A comparison of indices for electrical (N-8 electric locomotive) and diesel (TE-3 diesel engine) under various conditions of operation on heavily travelled lines shows the advantage to lie with electrified traction. This makes possible an increase in train weight of 2-8%, an increase in point-to-point speed of 34-48%, in traffic capacity of 45-64%, of transit capacity by 56-62%, of average daily locomotive run by 10-60%, and of locomotive utilization by 41-77%. The number of locomotives required is reduced by 29-43%, and the consumption of standard fuel units reduced to that of a thermal electric power plant is cut by 2-11%. The total cost of haulage on single-track lines, when the N-8 electric locomotive is used, is less by 5-9%, and by 11% on two-way lines, than when diesel traction is used. However, as indicated above, electrification of transport requires significant capital investments.

The data adduced pertain to railway transport under average conditions of operation: moderate freight traffic, average right-of-way, and mean prices for fuel and electricity. The efficiency of electrical traction is considerably greater on roads with high freight and difficult right-of-way.

It should be remarked that the expenditures upon diesel repair per unit of run are 50 to 100% greater, than for the repair of electrical engines (chiefly because of the time-consuming work in engine repair). The length of service of diesel locomotives, and particularly their major component, the diesel engine, is much less than that of the major assemblies of an electric locomotive.

The use of alternating current in electrification of railroads provides a further reduction of cost of haulage of 5-7%, and a 15-17% economy in capital expenditures. Moreover, the need for non-ferrous metals is reduced by 50-

60% when compared to the utilization of 3,000 volt DC current. Therefore, it is proposed that 11,000 of the 20,000 kilometers to undergo electrification during the present seven-year plan should be electrified by means of single-phase alternating current of commercial frequency.

In solving the problem of utilization of one or the other progressive types of traction, a number of factors have to be taken into consideration. Thus, under ordinary conditions, if the price of diesel fuel is 260 rubles a ton (in conventional calculation) and that of electric power is 9 kopecks per kilowatt hour, the grade being calculated at 9 per thousand, the use of diesel traction (TE-3 engine) is more desirable, if the freight intensity is up to 20 million ton-kilometers per kilometer. If the freight density is greater, the use of electric traction (N-8 electric locomotive) becomes more efficient. Reduction in the cost of electrical energy as compared to diesel fuel expands the sphere of application of electrical traction. Thus, if the cost of electrical energy is 4 kopecks per kilowatt hour and that of diesel fuel 260 rubles per ton, electrical traction is more profitable than diesel, at freight turnovers of 13 million ton-kilometers per kilometer or more, on lines with a calculated grade of 9 per thousand.

As the grade becomes more severe, the desirability of electrical traction becomes greater. Thus, on lines with a 12 per thousand grade, where diesel fuel costs 260 rubles per ton, electric traction is more desirable at freight densities in excess of 13 million ton-kilometers per kilometer, assuming the price of electricity to be 9 kopecks per kilowatt hour, while if the price of electricity is 4 kopecks per kilowatt hour, it should be used from 9 million ton-kilometers per kilometer. On double-track lines, with a calculated grade of 6 per thousand, electrical traction is desirable at freight densities in excess of 29 million ton-kilometers per kilometer. On the same lines, where the calculated grade is 9 per thousand or more, the use of electrical traction is more profitable, from the technological and economic standpoint, than diesel traction, at freight densities of over 25 million ton-kilometers per kilometer.

Thus, at the current prices for electric power and diesel fuel, use of electric traction is more efficient under conditions in which railway lines have high freight density. The two-section TE-2 and TE-3 diesel locomotives now being made often are completely incapable of providing the required level of freight density when the grade is difficult. The development of the TE-11 or the TE-50 two-section diesel locomotives with a total power of 6,000 h.p. considerably expands the range of efficient utilization of diesel traction.

The expenditures for replacement of steam engines in passenger and freight traffic, and also for switching work, are rapidly made good out of the economies in operating costs. Starting in 1959, the economies in operating costs due to the new types of traction will completely cover the capital investment for the annual estimated expenditures upon reconstruction of train traction, and will in the future exceed these expenses (including the cost of locomotives) to an ever greater degree. It should be remarked in this connection that the diesel electric and electric locomotive building plants are delivering locomotives, particularly diesels, to transport at what are as yet rather high prices, which include to a considerable degree the cost of development of the new types of locomotives. The effort to reduce the cost of locomotives is not being pursued adequately at the enterprises. The schedules and scales of delivery of diesel and electric locomotives to the railroads are often violated.

The advantages of electrical and diesel traction relative to steam traction are recognized on all the continents of the earth, and in many of the economically developed countries, gradual substitution of new types of traction for steam traction is under way. In the countries of western Europe, electrified lines come to 60% of the total electrified lines in the entire world. In the United States, dieselization of the railroads is coming to completion. In length of electrified lines and total haulage with the aid of electric traction, the USSR has achieved first place in the world, having passed a number of countries that undertook electrification five to ten years earlier than the USSR.

The extensive use of diesel locomotives in the United States is explained by the fact that the intensity of traffic on the railroads there is considerably lower. Under these conditions, the period required for amortization of capital investments in electrification is considerably lower than when diesel engines are employed. The capitalist relationships of production are hampering the development of the more progressive type of traction — electric traction. The railway monopolies are fearful of becoming dependent upon the suppliers of electric power. In addition, under the conditions of dominance of private capitalist property, it is difficult to provide a unified system of current, voltage, and also of electric locomotive types. It should be observed that the United States has enormous petroleum product resources. In the West European capitalist countries, where there is a shortage of local petroleum product resources, it is not diesel, but electrical traction that has attained substantial expansion.

In determining the profitability of the new forms of traction, certain economists fail to take into consideration all the factors affecting the efficiency of utilization of various types of traction.

In the investigations of the Institute of Complex Transport Problems of the USSR Academy of Sciences and of the Moscow Institute of Transport Engineers for the purposes of a more complete investigation of the economic efficiency of utilization of the various types of transport, the factors taken into consideration, in addition to traffic density, difficulty of the right-of-way, and number of main tracks included the prices of fuel and electric energy. Also taken into consideration was the length of station sidings, the number of locomotives per train enabling a higher freight density to be attained with a given type of locomotive, the additional capital expenditures required in developing interrelated branches of the national economy involved in reconstruction of traction (the petroleum industry, coal mines, transport equipment manufacture, electric power plants, etc.). These factors introduce significant corrections into the economic indices for the efficiency of the new locomotive technology. In evaluating the efficiency of utilization of various types of traction, examination was also made of indices such as the productivity of the labor of railway personnel with the various types of traction, the consumption of ferrous and non-ferrous metals, fuels, etc. This permitted a more complete and rounded examination of the problem of the desirability of utilization of electric and diesel traction and of particular new models of locomotives. Supplementary investigations showed, in particular, that utilization of electrical and diesel tractions substantially reduces the need for labor power, fuel, electrical energy, and metals. Moreover, labor productivity rises by an average of 17-20%. When steam engines are replaced by electric engines, the need for natural fuels is reduced by 50% to 60% (recalculated as fuel consumed by thermal electric power plants), and by a factor of 10 to 11 when diesel engines replace steam engines. Moreover, the introduction of electrical traction reduces the volume of

fuel haulage to meet the needs of transportation, and the need for rolling stock for this purpose (considering length of haul) by a factor of nine or ten, while diesel electric traction brings a reduction by a factor of 8 or 9 in this same category. The consumption of metal for locomotive building is reduced by 12% when the new types of traction are employed, while that required for repair of electric engines is only one third as great, and that of diesel engines only one half as great as with steam. Calculations have shown that where the roads are electrified, the supplementary consumption of ferrous metals to build circuits and substations is compensated for by the metal saved in building electric locomotives.

In determining the efficiency of utilization of one or another form of traction and locomotive model for specific conditions, it is necessary, not only to compare technical and economic indices for the various variants, but to take into consideration the long-range rates of growth of transportation, resources of fuel and power, climatic conditions, and certain other factors.

An extensive introduction of electrical and diesel traction along the main railway routes leads to profound changes in the process of production and in transport economics, creates conditions for better utilization of the technological facilities available to transport, simplifies the methods of operation of the rolling stock, and improves the methods of management of train movement. The indices of utilization of railway rolling stock undergo a particularly marked improvement. Data on the utilization of locomotives show that one electric locomotive can usually substitute for two steam locomotives on the average, while there are some railroads where it actually will replace more than four steam locomotives (on the Omsk railway one electric is the equivalent of 4.6 steam locomotives); one diesel engine replaces 1.8 steam engines on the average and in some places as many as 2 or 3 steam engines (on the Orenburg, Tashkent and southeastern railways).

It should be noted that the cost of transportation when electric traction is used has been cut to an average of 34.5% less than with steam, the corresponding figure with diesel traction being a 29% reduction. The share of expenditures for locomotive service in the over-all expenditures of the railroads has dropped from 40-55% to 26-30%, and the gross magnitude of these expenditures has been cut by 60-67%. Expenditures upon maintenance of the trolley lines and the traction substations affect the scale of expenditures when electric traction is used (constituting approximately 14% of the total expenditures of locomotive service). When diesel engine traction is used expenditures in a number of categories are still higher than with electric, as may be seen from the following table (expenditures in locomotive maintenance and power divisions per 10,000 ton-kilometers gross in 1957; rubles and kopecks).

	With electric locomotive VL-22m	With diesel locomotive TE-3
All expenditures (without amortization)	35-04	35-67
Including:		
Wages to locomotive crews	5-97	6-57
Fuel and electric power for train haulage	15-93	13-68
Current maintenance and medium-scale repairs for locomotives	1-67	5-76
Locomotive supplies	0-62	2-24
Of which, lubrication	0-12	1-16
Maintenance of trolley lines and substations	4-54	—
Overhead	6-31	7-42

The grade has a considerably smaller effect upon the scale of operating expenditures with electrical and diesel traction than with steam traction. However, prices of electrical power and diesel fuel do affect cost of transportation. Thus, a 20% reduction in the cost of one ton of standard fuel units with diesel traction results in a 3.5-8.5% reduction in operating expenditures. If diesel engines are converted to operation on sulphur-containing fuel, and subsequently to heavy oil, the share of the fuel component in costs of haulage will be cut by more than 50%. A reduction of, let us say, 50% in price of electric power for electric locomotives would make it possible to reduce the cost of haulage by 12 to 22%, depending upon various circumstances.

A reduction in the cost of haulage may also be attained by improving and reducing the cost of manufacture of diesel and electric locomotives, and also of the equipment of traction substations, by going over to a system of operating diesel engines with crews of two instead of three, by accelerating the rates of development of designs for hydraulic transmissions for powerful diesel engines, which would reduce the cost of the engines by 40%, and would cut repair expenditures by 30%, cause a reduction in weight, reduction in metal usage — particularly non-ferrous — and simplification of servicing of diesel engines.

Regeneration of electric power into the network on downgrades of over 6 per thousand permits savings of 10-15% in electric power when electric traction is used. Significant resources for reducing the cost of hauls may be accomplished by the use of transistors, of electromagnetic steel, of organic silicon insulation, by acceleration of conversion to automatic substation operation, etc.

The average indices of diesel and electric locomotive utilization recorded in the system are by no means the limit that can be achieved. There are great unutilized resources for further improvement in the economic efficiency of progressive forms of traction available in the divisions and railroads. For example, under the conditions of the present day, it is possible without additional capital expenditures to attain average daily runs of electric locomotives of 800-900 kilometers on double-track lines, and of 500-600 kilometers by diesel engines on single-track lines. The utilization of electric engines can be brought up to 2.5-3 million ton-kilometers gross, and that of diesel engines to 2.5 million ton-kilometers gross per day. Leading locomotive engineers have already attained such levels.

It should be observed that the real number of locomotives available in the railroads continues to exceed the established need for them. This is explained by the uneven movement of trains, the poor organization of locomotive supplies, inadequate utilization of the replacement method of servicing, and also the deadheading system of movement.

Calculations show that a reduction of 2.5 to 3 hours in idle time of diesel and electric locomotives raises the average daily run of such engines by 200 kilometers and results in a corresponding reduction in the number of engines needed for operations.

The efficiency of utilization of new forms of traction is

often reduced by time lost waiting for signals, and by the making up of trains of less than maximum weight or the maximum number of cars. It is calculated that elimination of these shortcomings would increase the average gross weight of trains on some lines by 80 to 100 tons on the average, and that elimination of train waits in the course of runs and at signals would permit an increase in divisional speed by 3.4 kilometers per hour. Even with the new forms of traction, the difference between running speed and divisional speed is quite great, almost as much as with steam traction, or about 10 kilometers per hour. The holding of trains at intermediate stations with the new forms of traction differs little in magnitude from similar delays with steam traction, and the average remains, for the system as a whole, 0.5 minutes per kilometer of track.

There are a number of divisions, particularly on the Omsk, Orenburg and southeastern railroads where the full power of the TE-3 diesel engine is not employed chiefly because uniform weight standards are used in certain routings, regardless of the type of engine. It is necessary to re-examine these standards and to make greater use of economical combinations of electric and steam locomotives.

Locomotive engineers who have initiated the haulage of heavy weight trains have played an enormous role in increasing the weight of trains. The heavy weight engineers' movement has caused the weight of trains to be increased by 315 tons with diesel traction and by 349 tons with electric traction in 1957. Further dissemination of advanced experience, and also introduction of progressive methods of operation and repair will make possible a sharp increase in the utilization of locomotives and would improve other indices of operation of the railways.

Finally, it is to be emphasized once again that introduction of new forms of traction without appropriate preparation of the railway system and its repair facilities leads to incomplete utilization of locomotives and causes them to wear out earlier than necessary, thus reducing the effects obtained by utilization of the new forms of traction.

Utilization of reserves of electrical and diesel traction will make possible complete realization of the advantages of the new technology and will permit the grandiose undertakings faced by railway transport in achieving a rapidly rising volume of freight and passenger traffic with maximum efficiency and at minimum cost.

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Some Problems in the Improvement of National Economic Planning

(USING KAZAKHSTAN AS EXAMPLE)

The target figures for development of the national economy of the USSR in 1959-1965, adopted by the 21st Congress of the Communist Party of the Soviet Union envisage a grandiose program for the upbuilding of communism in our country. Problems of further upbuilding of the economies of the constituent republics and the economic districts play an important role in the seven-year plan. An example of the unflagging attention given by the Communist Party and the Soviet government to the development of the economy and culture of formerly backward nationality areas is that of Kazakhstan. The volume of industrial production in the Kazakh SSR rose 43 times from 1913 to 1958. The coal, ore, steel, rolled metal, copper, lead, zinc, rare metals, forging presses, equipment for the metals industries, and other types of industrial products of Kazakhstan have come to be of high significance in the Soviet Union as a whole. Kazakhstan has also recorded remarkable triumphs in the field of agriculture. As compared with 1953, sown acreage in the republic has trebled and constitutes 28,700,000 hectares, while plantings of grains have risen 3.3 times and are now 23,200,000 hectares. Prior to the planting of the virgin lands, the collective and state farms of Kazakhstan delivered 1,680,000,000 poods of grain to the government in the 21 years from 1933 to 1953, while they delivered 2,226,900,000 poods in the three years subsequent to the 20th Congress of the CPSU alone.

The target figures envisage a further upsurge of the economy of the Kazakh SSR. The volume of industrial production will rise approximately 170% from 1958 to 1965, and will then be approximately 100 times as great as in 1913. The average annual rate of increase of industrial production in the republic is 15%, while in the USSR as a whole it is 8.6%.

The seven-year plan also projects a further rise in the output of crop raising and livestock farming in Kazakhstan. In 1965, there will have been recorded a substantial increase in the gross grain crop, while the gross sugar beet crop will have risen between 90 and 120% over the 1958 figure, that of raw cotton by 70 to 100%, that of vegetable oil seeds by approximately 240%. The objective has been set of bringing the total number of sheep and goats in the republic up to 75 million, that of cattle to 7 and one half million and that of pigs to 2,600,000 by the end of 1965. This will make it possible to increase gross meat production by 150%, milk by 80% and wool by 110%. Transportation, communications, education, culture, science, and public health will undergo further development. There will be a substantial rise in the living standard of the people. The volume of construction work in Kazakhstan in the current seven-year plan will equal the total capital construction in the country during the first 17 years of Soviet government.

The flourishing of the Kazakh economy, as well as that of the entire economy of our country, is the result of the correct policy of the Communist Party of the Soviet Union. The economic policy of the Communist Party stems from the fundamental propositions of Marxism-Leninism on the laws of social development, and rests upon the creative activity and initiative of the broad masses of the working people. Basing itself on all-round analysis of the tendencies in the development of the socialist economy, the Party is boldly and promptly posing major problems of the upbuilding of socialism and communism and is pointing the road to their solution.

The economic policy of the Communist Party is reflected in the long-range national economic plans. The Leninist ideas of national economic planning provide the foundation for the five-year plans, the successful realization of which assured rapid rates of development of the economy and the conversion of our country in a short period of time into a powerful industrial and collective-farm state.

The role of national economic planning increases with the development of the socialist economy, and the tasks facing it become more complex. The continuous increase in the scale of production and construction in our country, the greater specialization and the expansion of the multifaceted relationships of production among enterprises, branches of the economy and economic districts require systematic improvement in the methodology and organization of planning.

The post-war years witnessed certain shortcomings in planning practice that restrained the development of the national economy to some degree. The excessive centralization in the organization of planning did not correspond to the new conditions of economic development of the country. This included the direct planning of numeral indices of the activities of 200,000 enterprises in various branches of industry and over 100,000 construction projects by the center, the planning of sown acreages and indices for the development of stock raising in the collective farms from above, etc. These shortcomings have been eliminated.

In recent years, the CC of the CPSU has carried out a number of exceedingly important measures to improve the planned guidance of all the branches of the economy. A new system of planning in agriculture was established in 1955. Measures to increase the rights of republic-wide and local agencies in the guidance of economic and cultural upbuilding resulted in a fundamental improvement in planning in industry and construction. The reorganization of industrial and building management played a particularly important role in this respect.

Along with shortcomings having to do with excessive centralization of planning, recent years have revealed the negative sides of the practice by which planning was annual and under which an essentially new plan for the coming year was compiled after December 31st of each preceding year. To eliminate this shortcoming, it was established that the planning of the national economy should be based on long-range plans, with goals broken down by years, by particular branches of industry, by constituent republics,

* Alma-Ata

by economic administrative districts, enterprises and construction projects. In connection therewith, the prior system of elaboration and approval of annual economic plans, which had essentially meant the adoption of new plans, was repealed as of 1959.

The organization of planning under modern conditions is based on elaboration of plans directly by the enterprise, the construction project, the local soviets, and the national economic councils. These plans have to stem from the control figures set forth by the State Planning Committee of the USSR with the participation of the State Planning Commissions of the constituent republics, the ministries and bureaus of the USSR, and approved by the USSR Council of Ministers. Thus, the elaboration of a unified national economic plan in accordance with the objectives formulated in the control figures starts at the enterprises and is completed in the State Planning Committee of the USSR with the compilation of a unified plan for development of the economy.

The 20th Congress of the Party noted the need to elaborate economic plans for periods covering several five-year-plan periods. In defining the direction of the country's economic development, for, say, 15 years, such a plan makes it possible to find the most efficient methods of improving the structure of the economy, of eliminating and preventing disproportions, of liquidating unevenness in rate of growth of production, which sometimes occurred in the past in the transition from one five-year plan to the next. For example, we know that in 1956 the plan for coal mining, metal, and cement production, lumber deliveries, and launching of operations of new enterprises was not fulfilled in a number of important branches of the economy. One of the reasons for this, in our opinion, lay in the fact that because of the lack of a plan covering several five-year plan periods, the fifth five-year plan, which covered 1951-1955, did not give adequate attention to the creation of construction supply dumps for a number of major branches of industry essential to increasing production in the next following period. In 1954-1955, the funds needed to create construction supply reserves required for the launching of capacities planned for 1956 were not appropriated. This is one of the reasons why the 1956 plan for launching new capacities was not fulfilled and, consequently, neither was the plan for production of the major types of industrial products. If it should become necessary, in the course of carrying out the plan to reduce the volume of capital investments for some particular year, for whatever reason, the absence of a long-range plan results in such curtailment usually being done at the expense of projects planned to be launched in operation in the period ahead. This was expressed particularly in reduction in the volume of uncompleted construction in the final years of the last two five-year plans. Thus, in 1950, the last year of the fourth five-year plan, the volume of incompleted construction in the USSR as a whole was 84.3% of the volume of fixed capital brought into operation. Subsequently this figure rose considerably more rapidly than did the launching of operations of fixed capital, and in 1953 it constituted 111% of the value of fixed capital on which construction was completed. At the end of the fifth five-year plan, in 1955, the volume of incomplete construction again dropped to 99.8% of the value of fixed capital actually launched into operation during the year. During the first years of the sixth five-year plan, incompleted construction again rose more rapidly than the launching of new projects into operation.

At the present time the volume of incompleted construction in a number of branches and districts is exceptionally great, and the problem of reducing this as far as possible faces us. However, it must be borne in mind that incompleted construction and reserves of construction are not the same thing. Incompleted construction includes projects not provided for in the plan and of secondary importance, as well as projects representing dissipation of capital investments. Construction reserves in one or another branch of industry should be understood as the construction of projects the launching of which will assure a rise in capacities and consequently an increase in the volume of output of the given type of product after the end of the given plan period. In view of the fact that inadequate attention has been given in recent years to the establishment of a construction backlog in the Karaganda coal-mining district, coal output there declined somewhat in 1957 as against the preceding year.

The absence of plans spanning several five-year-plan periods, and the related lag in development of reserves under construction when a new five-year-plan period is entered is expressed not only in the ratio of the volume of incompleted construction to the launching of operations of fixed capital during various years of the five-year plan, but also in the rates of increase in production. Thus, in 1954, industrial production in the USSR rose 13% over the prior year, while in 1956, the first year of the sixth five-year plan, it rose by 11%. The corresponding data for Kazakhstan are 11.4% and 8%, respectively. This kind of "shock approach" within the span of a five-year plan would be done away with if plans were elaborated for periods of 10 to 15 years.

A most important task in planning the national economy is maintenance of the required proportions in the development of the economy of the country, of its various branches and districts. The draft plan for development of the Kazakh economy for 1959-1965 is based on the need for rational utilization of the natural resources within the republic and of the existing production capacities, with consideration of the requirements and interests of the economy of the country as a whole. Increase in the production of such products as ferrous and non-ferrous metals, coal, the products of petroleum and chemical industry, grain, wheat, butter and milk, is defined in the plan for the economic development of Kazakhstan in terms of consideration of the USSR-wide balance of these products and analysis of the conditions and possibilities of production thereof within the republic. In addition thereto, the plan undertakes to eliminate particular disproportions in the developments of enterprises that are of union-wide significance.

Further development of non-ferrous metallurgy in Kazakhstan is retarded by the lag in the ore-mining base. There is a disproportion between the capacities of the mines, the dressing mills and the refineries. Elimination of this disproportion requires primarily an increase in the ore supply of the copper industry at Dzhezkazgan.

Problems of rational utilization of the natural resources of Kazakhstan in the interests of further development of all branches of industry and agriculture and of proper distribution thereof involve the problem of water supply to a very considerable degree. To this day, there is no general plan for utilization of water resources in the republic. Problems of water supply of existing and newly-established enterprises are handled in each case independent of any consideration of the over-all need of water in the given district. Limitation of water resources may inhibit progress in the national economy of Kazakhstan, particularly of central Kazakhstan. A pressing problem in developing the republic's economy is elaboration of a general plan for water to meet the needs of the Kazakh economy.

Rapid development of the branches of Kazakh industry

engaged in the extraction of primary materials requires major construction undertakings. The target figures project 116 to 119 billion rubles of investment in the Kazakh economy over the seven-year period. In order to assure utilization of these funds, considerable enlargement of the manufacturing aspects of the building materials industry in the republic is required. Currently, production of building materials in the republic does not meet the requirements of capital investment plans. Thus, in 1957, production of building materials lagged behind the requirement of the economy for wall materials by approximately 450 million bricks (in standard units), 50,000 tons of lime and 23,000 tons of gypsum. There is an even greater spread between cement requirements and production. Nor does the republic manufacture such building materials as dry plaster, slag wool, fiberboard, glass, sanitation equipment, and slate. The shortage of construction materials inhibits the rates of growth of capital construction and not infrequently leads to underfulfillment of plans of construction and erection and of plans for launching operations of new capacities.

Fulfillment of the program for construction envisaged in the target figures for Kazakhstan requires expansion of the manufacture of building materials in the localities by every possible means. A searching out of and a utilization of internal reserves for growth of production, an expansion of the list of and in improvement of the quality of building materials is a most important problem facing the planning agencies of the republic in the coming seven-year period.

The granting of broad rights to local agencies facilitates involvement of the masses of working people in the elaboration of plans, and makes it possible for enterprises and organizations, national economic councils, ministries, bureaus and local soviets to analyze the state of the economy, to discover difficulties and unsolved problems facing its further development, and to look ahead. But in so doing, the interests of the country as a whole and of other economic districts and republics must not be forgotten.

The problem of proper coordination of local initiative with strict observance of national interests is among the most important problems of organization and methodology of planning at the present stage of development. We know that instances have occurred in which some national economic councils have not carried out plans for delivery of products to other economic districts. Thus, the national economic council for south Kazakhstan delivered only 87.4% of the planned amount of industrial products to go beyond the bounds of the republic during the first half of 1958, with the result that national economic councils in the Russian Federation, the Ukraine, and Estonia did not receive the forging presses they needed. The Karaganda national economic council fell 20% short of its plan for deliveries to other administrative economic districts, and delivered only 89.4% of the coal-mining combines it was supposed to.

The extension of the rights of the constituent republics, and the formation of national economic councils for the economic administrative districts, and transference to their judgment of many important problems of administration and planning are serving to release local initiative, raise local responsibilities and interest in the development of the economy, and serve to mobilize further resources for increasing socialist production. However, the efforts and the initiative of the localities should be centered primarily on solution of problems facing the country as a whole. Without coordination by the central planning organization, the activities of the local agencies in development of the economy cannot attain the desired results.

The significance of the development of nation-wide basic targets (the control figures) for compilation of plans of the republics and districts may be illustrated by the following example. In the draft plans presented to the State Planning Committee of the USSR by the constituent republics, high rates of development of hydroelectric power were set forth. Specifically, it was planned to build the Shulbinskaya Hydroelectric Station on the Irtysh River in Kazakhstan. However, in view of the problem of gaining maximum time in the economic competition with the most advanced capitalist countries, it is today desirable to build thermal stations burning cheap fuels at more rapid rates and somewhat to reduce the rates of construction of hydroelectric plants. This will result in about 10 million kilowatts additional capacity being launched in the seven-year period by reduction of capital investments in hydro-power construction. Had the installation of new capacity planned by the target figures been accompanied by retention of the relationship between thermal and hydraulic stations that had come into being in the preceding years, it would have been necessary either to reduce the launching of new capacities or to increase investments in power production by 23 billion rubles.

An enormous role in the elaboration and realization of the economic plans is played by the creative activities of the masses of people. The personnel at the plant level are familiar with all resources for further increase in production at the given enterprise, factory, mine, state farm or collective farm. Extensive participation by the masses of the people in elaboration of the plans will significantly improve the level of planning. The development of local initiative for the purpose of seeking out the best possibilities for fulfillment of the objectives established by the target figures for the various constituent republics, and for the economic administrative districts within the republics, will provide a profound economic rationale for the plans.

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M. Osadko

Strengthening the Principle of Material Incentive in Collective Farm Production*

The seven-year plan for the development of the economy in 1959-1965 has posed tremendous undertakings for agriculture. A most important role in the solution thereof is to be played by the collective farms, in which the bulk of all agricultural products are produced.

Further increase in collective farm production requires an increase in the material incentives to the collective farmers in the development of the public economy, and an increase in their work activity in the social portion of production. Personal incentive to working people is a major motive force in the development of socialism. The all-out reinforcement of the Leninist principle of personal material incentive to the working people is one of the most important objectives of economic policy.

A major role in the over-all system of measures for strengthening the principle of material incentive in the collective farms pertains to improvement in the system of payment for the labor of the collective farmers.

The principle of distribution in accordance with labor underlies payment for the labor of the collective farmer as it does payment to the worker of the government-owned enterprise. The workers' share in the social product set aside for personal consumption should correspond to his share in the labor of society. The product obtained by the worker from society for his labor should embody as much socially necessary labor as is expended by the worker, minus the portion going to public funds. Consequently, a strengthening of the principle of personal material incentive for the collective farmers presumes on the one hand an improvement in accounting of the share of each collective farmer in expenditures of the labor of society and, deriving from the foregoing, of his share in the social product, while on the other hand a closer correspondence has to be established between the labor of the worker and the scale of his consumption.

In the first stage of its development, the collective farm system rested on a relatively smaller share of large-scale cooperative ownership of the means of production. This was determined by the relatively small scale of the collective farms, the inadequate development of their monetary holdings, and this limited the employment of modern technology and increase in the productivity of labor.

At the present stage of its development, the collective farm system rests upon a larger-scale cooperative property in the means of production. This has made it possible to turn all the basic means of production over to the fixed capital of the collective farms. The powerful technology available to the collective farms makes for a rapid rise in labor productivity, an increase in the output of produce and an increase in the proportion of the products jointly produced offered for sale as commodities. The Communist Party and the Soviet government have, in recent years, carried out a number of measures facilitating advancement of the initiative of the collective farmers and of increase in their material self-interest in the development of collective farm production: a change in the system of planning of collective-farm production, improvement in the supply of equipment to the collective farms, a reinforcement of the financial assistance thereto, reorganization of the Machine and Tractor Stations and sale of their equipment to the collective farms, reduction of the requirements and finally repeal of compulsory deliveries and of payment in kind, increase in prices and establishment of unified prices for the agricultural produce sold to the government.

The serious changes made in collective farm production required corresponding improvement in forms of accounting and payment to labor for a strengthening of the principle of personal incentive.

The form of accounting of collective-farm labor and the form of payment thereto are governed by the level of economic development of the collective farms. There is an organic connection between the form of accounting of labor and the form in which it is paid.

Until most recently, distribution in accordance with work done was characterized, in the collective farms, by accounting of collective farm labor in labor-day units on the one hand, while, on the other, a considerable portion of the payment for labor was made in kind.

At a specific stage in the development of the collective farms, measurement of labor in work-day units and payment for work-day units in kind either for the most part or in considerable degree were inevitable. This form of distribution in accordance with labor was necessary at that time. It served the purpose of personal material incentive to the collective farmers in developing production by the collective farms, and in increasing their contribution of labor to the socially-owned portion of the economy. At that time the use of any other form of measurement of labor for the purpose of determining the collective farmers' share in the product to be distributed in accordance with labor contributed would have been difficult.

Under conditions in which commodity and monetary relationships obtain, each unit of labor expended can be expressed as a portion of the labor of society by means of money. The labor of workers in the government-owned sector of production constitutes a direct portion of social labor. The product created by workers in the government-owned sector is not the property of these workers but the property of society as a whole as represented by government. The individual wages of workers in the government-owned sector of production represents a monetary equivalent for a product, in which is embodied as much socially necessary labor as has been expended by the workers, minus that retained for public funds. Wages are a form in which the worker obtains his share in the social product corresponding to his share in social labor. However, before the worker's share in the social product can be determined, it is necessary to determine his share in the labor of society.

* To launch a discussion.

The calculation of individual wages is a calculation of the labor of the personnel of the government-owned sector of production in monetary form.

A cooperative enterprise differs from a government enterprise, in part, in that the labor of its members is somewhat individualized (when compared to that of government-owned enterprises) inasmuch as cooperation among workers develops here not on the basis of national, but on the basis of the collective property of a group of working people in the means of production. To the degree that the means of production and the labor belong to the collective farm, to that degree the product created by the collective farmers also belong to it.

The collective farmer obtains his share in the social product as a share in the income of the collective farm corresponding to his share in the labor of the entire collective. Therefore, distribution in accordance with work requires an accounting of the labor of each collective farmer, primarily as a portion of the labor of the given collective.

Division of labor in socialist society ties the collective labor of a cooperative enterprise to the labor of society as a whole, and converts this labor into an indissoluble portion of general social labor. As a portion of social labor, the labor of the collective is subject to accounting and control by society through the medium of money.

However, the ties of the collective farm to society via the distribution of labor were realized, during the first stage of development of the collective farm system, under conditions of an inadequate level of socialization of labor in agriculture. This was the peculiar heritage from small private enterprise to the collective farms. The individual peasant's economy differs from that of the handicraftsman in that it is not only the field of productive activity of the peasant, but is also the source of the most important items of consumption he utilizes. Only the surplus products produced in the peasant economy went to the cities in exchange for industrial products. We know, that in 1926-27, on the eve of mass collectivization, only 11.2% of the grain produced by the middle and poor peasantry went for sale on the market.

The unification of the individual peasants into collective farm cooperatives is not capable of eliminating this peculiarity of the peasant economy immediately. Although the proportion of agricultural produce available to the market increased sharply with the creation of the collective farms, the source of a number of products most important to the collective farmer remains the collective farm. Moreover, the collective farmers satisfy a considerable portion of their requirement from their individual plots.

Consequently, a large quantity of products in the collective farms moved from the sphere of production to the sphere of consumption only within the bounds of the cooperative, and did not become commodities. A substantial number of products, in conversion from the social economy to the private economy of the collective farmer, did not even pass through the process of production (for example, feed for the cattle they themselves owned). Under conditions in which the social economy was inadequately developed and the personal economy represented a large share of agricultural production, the share of collective farm production that did not become commodities was high. As a result, a substantial portion of collective farm labor was not, in our opinion, expended as a portion of general social labor and could be deemed social only within the bounds of the given collective farm.

In industrial cooperative enterprises, the entire product takes on the form of commodities and goes into social circulation. The labor of such an enterprise emerges as a portion of common social labor. Being a portion of social labor, all the labor of the workers of the industrial cooperative, including that of each indivdual as a portion of the collective labor, is subject to accounting in monetary form by society. The monetary form of accounting of the labor of the collective of an individual cooperative enterprise permits utilization of the monetary form for determining the share of the worker in the labor of the collective and in society as a whole. Under these conditions, the workers of industrial cooperatives obtain their share of the social product in the form of wages. Unlike government-owned enterprises, the wage here represents the worker's share in the social product through his share in the product of the cooperative.

In the first stage of their development a considerable portion of the production of collective farms did not take on the form of commodities. Therefore, expenditures of labor could not be completely measured in money, and the objective necessity for another form of measurement of collective farm labor arose. In the collective farms, this took on the form of calculation of labor-day units. This form of measurement of labor was comprehensible to and acceptable by the collective farms. The calculation of work-day units was used to determine the degree of participation by the collective farmer in the expenditures of labor of the cooperative. Each work-day unit with which he was credited gave the collective farmer a right to a specific share of the product set aside for distribution in accordance with labor performed. The size of the collective farmer's income depended upon the number of work-day units he had earned and upon the scale of payment for work-day units established by the given collective farm.

Intimately related to the totalling of work-day units was the payment for the work-day unit not only in money but in kind. The collective farmers themselves were interested in this. The collective farmers' consumption consisted in large part of agricultural products obtained from the common and his personal enterprise. The collective farmers were also interested in obtaining a certain excess of products, since sale thereof in the collective farm market was a supplementary source of personal income.

A substantial scale of natural relationships between the collective farm and the collective farmers in the period now past is testified to, for example, by the fact that in 1937, the average payment per labor-day unit for the USSR as a whole was 4 kilograms of grain and only 0.86 rubles in money. There were 53,800 collective farms in which over 5 kilograms of grain was distributed per work-day unit, 5,700 collectives in which the figure was 10 kilograms, and 126 collective farms in which the figure was over 20 kilograms of grain.

As collective farm production progressed and specialization developed, the percentage of the product going for sale on the market, and the share of monetary payment for labor increased. There was a corresponding decline in the share of that portion of the product that had to be retained in kind for the production and personal consumption of the collective farm and the collective farmers, while the share of industrial products that could only be obtained in exchange for agricultural produce via money increased in consumption. In this connection, monetary relationships within the collective farm and between the collective farm on the one hand and the collective farmers on the other progressed. As the payment for labor rises, the share of payment in kind diminishes and the share of monetary payment increases. Whereas, in 1952, the total monetary receipts of the collective farms came to 42,800,000,000 rubles, in 1957 the figure was 95,200,000,000 rubles. The

total of payments in money and kind per labor-day units rose, during this same period, in adjusted comparable prices, from 47,500,000,000 to 83,800,000,000 rubles. Commodity turnover through the central cooperative union alone increased 120% in the 1953-1957 period when compared to the preceding five years. Whereas in 1932 the average payment per labor-day unit for the USSR as a whole was 0.41 ruble in 1937 it was 0.86 ruble, in 1952 1.4 rubles, while in 1956 the monetary payment per labor-day unit had reached 3.8 rubles. As a result, conditions have already matured in a number of collective farms, and are maturing in others, in which it is more profitable for the collective farmer to take his pay from the collective farm purely in the form of money. This is related to the fact that as payment for labor rises, and the development of commodity exchange between town and country proceeds, the collective farmer satisfies an ever-increasing portion of his needs by means of the products of industry, including agricultural produce that has been industrially processed (flour, confectioneries, preserved meat and vegetables, etc.). Further, as the payment of labor increases, and prices on the collective farm market come to approximate government purchase prices, there is a reduction in the material incentive to the collective farmers in receiving surplus products for his labor-day unit over the minimum needed to satisfy his own needs for them.

Finally, the increase in the social economy of the collective farm and the creation of reserve supplies makes it possible for the collective farmer to obtain the products needed for his personal use at any time and in any quantity in exchange for money.

Consequently, as the public portion of the economy progresses, there is an increase in the incentive to the collective farmer to substitute monetary payments for payment for his labor in kind. As the public economy increases further, the creation of reserve supplies, the construction in the village by the collective farms and the cooperative movement of enterprises for processing agricultural products, and the development of rural commerce will cause an even more rapid increase in his interest in this.

During the current seven-year plan, the volume of production of agricultural products will increase at rapid rates, and the proportion of the output going outside the collective farm will rise rapidly. In industry, there will be a substantial increase in the production of means of production and of means of consumption for sale to collective farms. All this will increase the need for money on the part both of the collective farms and the collective farmers. Consequently, the interest of the collective farms in production and the personal interest of the collective farmers are ever more urgently demanding conversion from payment for labor-day unit in kind to monetary payment.

Payment for labor-day units in money alone means that the conditions necessitating a recording of labor in labor-day units have already been overcome. All that remains is the form of accounting of labor in labor-day units, and this is in essence already a monetary accounting of labor. The need for utilization of the labor-day unit disappears, and the collective farms proceed from payment for labor-day units to monetary accounting and payment of labor. This constitutes a transition from payment for labor-day units to wages.

In accelerating the transition from payment for labor-day unit to the monetary form of accounting and payment for labor, elimination of obstacles standing in the way of increase in the portion of collective farm production going outside the collective farm plays an important role. However, the established practice in distribution of collective farm income has come to involve a procedure for distribution of the product which, in our opinion, creates an artificial contradiction between the social and personal interests of the collective farmers in increasing the portion of the produce that becomes commodities. The scale of the social funds in the collective farm, including the scale of deduction for increasing the indivisible capital, is directly related not to the gross or net income of the collective farm but to the monetary receipts thereof. Under these conditions, it is more profitable to the collective farmer that a larger portion of the product paid for labor-day units is distributed in kind. After all, the greater the portion of the product that is sold the lower the payment to labor, all other conditions being equal. This contradiction has to be eliminated. The Rules of the Agricultural Artel must, in our opinion, be re-examined so that the size of deductions for expansion of indivisible capital has to be determined not by the volume of marketed production, by by the gross or net income of the collective farm. If this were done, the scale of commodity production would not influence the amount of payment of labor and the collective farmers would be interested in organized sale of all surplus farm produce, and in retaining in the collective farm only that essential to consumption for personal and production purposes.

Reinforcement of the principle of personal material incentive to the collective farmer in increase in collective farm production and in increasing the labor contributed by a collective farmer requires, in our opinion, not only a transition to monetary forms of accounting of and payment for labor, but also a greater degree of correspondence between the standard of labor and the standard of consumption of the collective farmers. On the one hand, the collective farmer, as a worker, should receive for his labor a monthly payment the size of which corresponds to the general conditions for payment of labor in the country and the level of development of the given collective farm. On the other hand, as a member of a cooperative, he is co-owner of all the property of the collective farm, and is responsible, jointly with the other members, for the successes and failures of their joint business. Therefore, payment of labor should consist of two portions: payment as such, established at the beginning of the year and paid out to the collective farmer regardless of the results of that year's operations, and a supplement determined at the end of the year and depending upon the amount of money that the farm can pay out for further distribution in accordance with work contributed.

The necessity and possibility for stable, fixed payment for labor is dictated by the very nature of the collective farm as a large-scale, socialist enterprise, and by the nature of the relationships between the collective farm and the collective farmers. During the first stage of development of the collective farm system in the USSR, instability in payment to labor was characteristic of the collective farm, as was a substantial difference between the factors of labor contributed and payment for labor. For a long time, the opinion was widespread that instability in the payment of labor and the collective farms was inevitable and was somehow due to the very nature of the collective farm as a cooperative enterprise. This point of view was based on the assumption that the essence of distribution in accordance with labor in the collective farm consists of distribution, by labor-days contributed, of the material and monetary funds remaining at the end of the year in the possession of the cooperative (after its social obligations had been met). In reality, the reasons for the shortcomings in accounting of and payment for collective farm labor

were the low level of development of the publicly-owned portion of the collective farm operations, the highly-seasonal nature of the work, the inadequate portion of the produce that went for sale, the lack of reserve supplies of products and money, etc.

The principle of personal incentive to the collective farmer, as to workers in the government-owned portion of production, requires a correct relationship between social labor expended by the worker and the labor received by him from society in exchange for the labor he has put out. This relationship must assure the receipt from society by each worker of consumer goods representing all the socially necessary labor he had put out, minus the portion going to social capital.

The equality between labor expended in one form and received in another is assured in the collective farms in different fashion than in the government-owned sector. Payment for labor of the worker is based on the general conditions of production and distribution of the social product. In the collective farm, however, the quantity of consumer goods per unit of labor expended is determined not only by the general conditions of production, sale and distribution of products, but by conditions peculiar to each individual collective farm. In order to assure material incentive to the collective farmers, it is necessary to establish correct relationships between the product going to satisfy general public needs, the product for the collective farms, and the product for collective farmers, not only on the scale of the collective farm sector of the economy as a whole, but within the limits of each individual collective farm.

When collective-farm labor is accounted in labor-day units, difficulties exist in assuring a correct relationship among the three components of the collective product referred to above. The crediting of a collective farmer with, for example, one labor-day unit, merely establishes his right to obtaining a specific share of the collective farm product distributed in accordance with labor contributed, but does not determine the actual quantity of payment to him. This resulted in particular difficulties in determining the necessary level of payment in the collective farms and paved the way for all kinds of violations due to poor systems of accounting, failure to understand the essence of material incentive to the collective farmers, etc. When a very large number of small collective farms existed, control on the part of the government was fearsomely complicated.

Some progressive collective farms were able to establish fixed monthly payments, even with the labor-day unit. One of the first collective farms to adopt fixed monthly payments to labor was the Red October Farm of Vozhgal rayon in Kirov Oblast. Here, as early as 1930-1931, a given quantity of various products and money was distributed each month per labor-day unit worked. The experience of the advanced collective farms shows that even when the labor-day unit is employed, it is possible to provide stability in payment and distribution thereof each month.

The carrying out of the measures set forth by the September, 1953, Plenary Meeting and subsequent Plenums of the CC CPSU, assured a rapid increase in the results and the commodity output of the collective farms. Measures were simultaneously undertaken to eliminate all distortions and malfeasance in the field of payment of labor. This all facilitated a wide dissemination of the system of monthly payment to labor. One of the first collective farms proceeding to monthly payment for labor and developing this system in every possible way, was the Bolshevik farm of Shostkin rayon of Sumy district. The Red Order collective farm of Tambov rayon of Amur Oblast, was one of the first to combine monthly payment for labor-day units and a fixed scale thereof. In 1956, for example, this collective farm established a monthly fixed payment of 9.5 rubles (when converted to money). At the end of that year, an additional 0.75 rubles was paid out for each labor-day unit.

However, this did not eliminate the difference between the form of accounting and the form of payment for labor existing when labor is measured in work-day units. When labor is measured in work-day units, the process of determining the share of the worker in product consists of two acts: the act of measuring his labor as a share in the collective labor of all members of the collective farm and the act of determining the magnitude of payment as a share in the product of the collective farm. As a result of this difference, the accounting of labor did not establish the dimension of payment for labor, and this had its effect upon realization of the principle of material incentive.

With a monetary form of accounting of, and payment for, labor, there is no dichotomy between the form of accounting and the form of paying for labor. Accounting of labor simultaneously defines the quantity of payment (because money reflects social labor) and the volume of consumption by the working people (because a given sum of money corresponds to a given quantity of consumer goods at the given moment, which the worker is capable of getting in exchange for his labor).

Complete and prompt payment depends upon a number of practices. These include, in the first place, a high level and all-round development of the publicly owned portion of the farm production, a correct organization of production and sale of the produce, assuring planned receipt of product and monetary incomes by a farm economy, and a creation of reserves of goods and money. Reserves of goods and money are of particular significance. They assure annual payment of labor regardless of current receipts, and also eliminate the influence of unfavorable weather conditions upon the scale of payment for labor.

Increase in the real content of payments for labor, that is, the number of objects for consumption and services that the collective farmer is capable of receiving from the collective farm in exchange for his labor, plays a major role in increasing the material incentive to the collective farmers. However, the real wage depends not only upon the level of development of the collective farm, but upon the level of prices for industrial and agricultural commodities. Moreover, the real possibilities existing for acquiring these products also play an important role. This explains the major significance of further improvement of the prices paid for farm products, extensive expansion of the sale of industrial and agricultural products in the villages, increase in the available assortment, and a more complete consideration of the tastes of the agricultural population, as well as a constant reduction in the cost of collective farm products in strengthening the material incentive to the collective farmers.

At the present time, agricultural products obtained from his own private plot play a significant role in the consumption of the collective farmer. This is also a heritage from the small private enterprise, with its low production. The very existence of a private plot is explained by the inadequate level of development of the publicly-operated portion of the cooperative farm, which is not capable to fully meeting the needs of its members as far as vegetables and livestock products are concerned.

Today, favorable conditions have developed for more complete utilization of factors of growth in the productivity of collective farm labor and in the production of collective farm products per worker and per 100 hectares of farm

land. This will assure a rapid increase in payment for labor and the possibility of satisfying the collective farmers' needs for various agricultural products out of the socially-operated portion of the cooperatives' business. The seven-year plan for development of the national economy envisages a 40% increase in the real income of collective farmers, chiefly by increase in the jointly-produced portion of collective farm production.

Increase in payment to labor and provision of various agricultural products to collective farmers from the publicly-operated portion of the business is a condition for the gradual elimination of the personal farming activities of the collective farmers. It is more profitable to the collective farmer to receive the products he needs from the jointly-owned business than to expend a great deal of labor in producing them in his own farm plot, with its low level of productivity. The time that the collective farmer thus gains may be utilized to increase his contribution of labor to the joint economy or for cultured recreation.

An increase in the material incentive to the collective farmers requires that the incomes of the collective farmers and their living standard undergo a constant increase, along with the rise in the publicly-owned portion of the cooperatives' undertaking and the productivity thereof, so that accumulations serve to raise production and the consumption of the collective farmers. Therefore, payment for the labor of the collective farmers will rise with the rise in the publicly-operated portion of the business. However, the scale of payment should, in our opinion, have a maximum determined by the wage level of workers in the government-owned fields of production. This level should reflect a definite proportionality between the product for society and the product kept for oneself, as established for society as a whole.

Today, a substantial number of collective farms have reached and even exceeded this level. The number of such collective farms rises from year to year. The net income of the collective farms will rise accordingly. In this connection, it becomes possible for an ever-increasing portion of the net income of the farm to be used for distribution in accordance with labor above the fixed rate of wages. However, this portion of net income should not be excessively increased, as otherwise the level of payment to collective farmers will be separated from the level of wages to workers in the government-owned operated sector of the economy, and the requirement that distribution be according to labor will be violated. As the socially-operated portion of the business of the collective farm is further reinforced, and its production of income increases, an ever larger portion of net income should be directed toward expansion of productive, cultural, and service needs, social assistance funds, and civic improvements in the village.

As the publicly-owned portion of the farms' business increases, along with the general level of the national economy, conditions will be created for eliminating the extreme differentiation existing at the present time in payments to collective farmers in different collective farms. This differentiation came into being for three chief reasons. In the first place, it arose out of the differences in the circumstances under which various collective farms were organized; in the second place, out of the differences in the level of operation of the various farms, and in the third place out of the fact that certain farms exist under more favorable circumstances than others.

The higher payments to labor in the most advanced collective farms was and is a major factor in reinforcing the collective farmers' material interest in increasing the productivity of labor, in better utilization of the land, the tools of production, and the available labor force. But it must not place the collective farmers of these particular farms in unjustifiably superior conditions to those of others.

The new system of procurement has as its purpose to assure correct relationships between the product for the government, the product for the collective farm, and for the collective farmers within each cooperative, and to end the unjustified receipt of supplementary income by some collective farms at the expense of the common interests of all.

In the past, failure to consider differences in economic conditions often led to a situation in which collective farms operating under identical natural conditions delivered different quantities of products per worker to the government. For example, in 1955, deliveries of grain per collective farmer were 2.7 centners from the Russia collective farm of Novo Aleksandrovskiy rayon of Stavropol territory, while deliveries from the adjacent, Motherlands collective farm existing under identical or possibly somewhat poorer natural conditions, were 5.6 centners.

The possibility available to each collective farm, given correct choice of crops and fields of operation and rational organization of marketing of the produce, to obtain additional income is a serious factor stimulating the production of products needed by the national economy and an increase in the proportion thereof made available for sale. However, the expenditures by the government for acquisition of collective farm products should stimulate an improvement in all the collective farms of the country, so that the labor embodied in a unit of production under identical natural conditions receives identical pay. However, under the system of supplementary premium payments, collective farms overfulfilling the plan for delivery of cotton to the government received an average of 350-400 rubles per centner, while collective farms that had no more than fulfilled this plan received 300 rubles. Under these conditions, better indices were often to be explained not so much by better work on the part of the collective farm, but by the fact that it happened to have more labor available or by other, similar conditions. There can be no doubt that the existence of a single scale of prices for cotton and for other products will strengthen the economies of average and economically weak farms. The introduction of a single scale of prices will play an important role in improving the production of all collective farms, and to a considerable degree in equalizing incomes thereof.

However, elimination of unjustified differentiation in the payments to labor of collective farmers in various collective farms should not be taken to mean a negation of all differentiation. So long as the payment to the collective farmer is less than the payment to the worker the more highly productive labor of the collective farmers of some farms may be permitted to gain them higher payment than at other farms, regardless of the reasons for this higher productivity. As the real wage of workers in the government-operated industries rises, and as the payment to collective farm labor rises to the level of payment to workers in the government-owned portion of the economy, this situation should, in our opinion, undergo a significant change. At that time, it will be economically undesirable to maintain differentiated payment to labor in different collective farms. The labor of the collective farmers will, in all collective farms, be paid essentially at the level of wage payments to workers in the government-owned branch of industry. The net income of the collective farm will go primarily to expansion of capital for purposes of production, and for cultural needs and services. The differentiation in the

(Continued on Page 88)

V. Gorelov

The Role of Scientific and Technological Collaboration Among the Lands of Socialism in the Development and Reinforcement of the World Socialist Economic System

The historic 21st Congress of the CPSU noted that all the socialist countries would undergo successful development with the further growth and strengthening of the world system of socialism. Countries hitherto economically backward will by basing themselves on the experience of other socialist countries, on collaboration and mutual aid, rapidly build up their economies and cultures. Thus, the common front of economic and cultural development of all the socialist countries would draw even, and the prerequisites for their transition from the first to the second phase of communism would be created at accelerated rates. The time is approaching when these countries will, like the Soviet Union, build a communist society.

The international socialist division of labor, harmoniously combining the interests of the national economy of each socialist country and the common interests of all the governments in the socialist camp is directed toward accelerating the rates of growth and the rational distribution of socialist production, toward an all-round economic development of each country. This is to be done with due consideration for the most effective utilization of each one's natural resources, production possibilities and historically developed habits of production of the population, with the purpose of assuring a continuously rising satisfaction of the material and cultural needs of the working people.

The economic, scientific and technological collaboration among the countries of the socialist camp is an historically new type of international relation, expressing the principles of socialist internationalism and based upon a complete equality of the countries, a rigid respect for their national sovereignty and on brotherly mutual aid.

In brief periods, historically speaking, the countries of the world socialist camp have completely restored their economies, destroyed in the Second World War, have achieved a mighty uplift of their productive forces and today, headed by the great Soviet Union, are successfully competing with the capitalist countries in the economic sphere.

The Communist and Workers' parties are assuring the uninterrupted economic, scientific and technological progress of the socialist countries both in the interests of each individual country and in the interests of the entire socialist camp. They are developing the major directions of progress for the economies of their countries, with due consideration for the international socialist division of labor.

The scientific and technological collaboration of the socialist countries plays an enormous and ever-increasing role in the development and strengthening of their economies, in strengthening the power of the world socialist economic system. It facilitates the creation and development in the socialist countries (on the basis of the most modern technology and with a considerable economy of funds and time) of the most important branches of the economy, mastering of the output of new types of products in materials, raw materials and power resources, introduction of the most advanced production technology, creation of skilled technical and scientific personnel, and the most rapid solution of the most important scientific problems, etc.

The socialist countries, united by their common social and economic system and objectives (the upbuilding of socialism and communism) share their latest achievements in the sphere of science, technology and production, and their experience, with each other. The collaboration of the socialist countries in the field of science and technology pursues no commercial objectives and is not based on any preconditions other than recognition of the fact that a given scientific or technical achievement or invention originated in a given country. All this clearly demonstrates the fundamental difference between scientific and technological collaboration on the part of the socialist countries on the one hand and the so-called technical aid granted by the imperialist powers to other countries of the capitalist world, directed to the extraction, by the monopolies, of enormous profits, by the economic and political enslavement of the underdeveloped countries.

The scientific and technological cooperation of the socialist countries, like their economic cooperation, represents independent forms of international relationships in the camp of socialism, while they are indissolubly interrelated and subordinated to a single objective — accelerated rates of progress in the economies and scientific and technological advancement in the socialist countries in the interest of the upbuilding of socialism and communism. A striking example of the close interrelation between economic, scientific and technological collaboration among socialist countries is the all-round assistance they grant each other in the design and construction of enterprises, in launching operation thereof, and in the training of personnel for the enterprises built.

The first inter-governmental agreements on scientific and technological collaboration were concluded in 1947 between the Soviet Union and the Polish Peoples' Republic, and also between the USSR and Czechoslovakia. Today, all the countries of the socialist camp are carrying out extensive collaboration in various fields of science and technology on the basis of analogous bi-lateral agreements.

An important place in the scientific and technological collaboration among the socialist countries is mutual exchange of technical documents, containing the essence of the accumulated production experience and achievements in the field of technology as it pertains to a specific area or group of subject matters. Technical documentation includes plans for construction of industrial and other projects (factories, plants, departments, mines, blast furnaces,

electric power stations, irrigation systems, cultural and service enterprises, etc.), sets of drawings and other documents for the manufacture of machinery, equipment, installations, instruments and documents covering process procedures. In addition to the mutual exchange of these types of technical documents, the socialist countries engage in a large-scale exchange of various standards, norms, technical specifications and instructions. The lands of socialism also exchange specimens of instruments, materials, products of various types, as well as samples of seed and plant material, selected plants, etc.

The country receiving technical documentation is in a position to get production of industrial products previously not manufactured under way at considerably lesser expenditures for planning and engineering, and is also able to introduce a new or more advanced process procedure, or to proceed to erect some structure. This means a substantial saving of government funds and designers' labor. According to the calculation of the central administration of the machine tool manufacturing industry of the Polish Peoples' Republic, the aid given by the Soviet Union to Poland in mastering the production of certain types of machine tools resulted in a saving of 2,000-4,000 hours of designing work per machine tool. Specifically, mastery of the production of 15 types of machine tools by our Polish comrades was accompanied by the saving of about 45,000 working hours, representing two years of work by a design office employing ten highly-skilled specialists.

The countries receiving technical documentation do not always completely copy the production process and the standards for the products, by any means. Often, the documents received are improved upon or modified to meet the specific conditions of production, the existing equipment, the availability of particular types of raw materials, and other materials, etc. However, under these circumstances, only a fraction as much time, labor and money is expended as if it had been necessary to develop the designs of various machines or types of equipment from scratch, in the given country.

It must be emphasized that any technical document remains the property of the country in which it was created, and questions of exchange or transfer of documentation remain entirely in the hands of the country whose property it is.

Each year, the mutual assignment of skilled specialists among the various socialist countries for the purpose of acquainting themselves with achievements in production and in science and technology in industry, construction, agriculture, transport, communications, etc., takes on larger scope. A substantial number of skilled persons were exchanged on the basis of the bi-lateral agreements on scientific and engineering collaboration between the Soviet Union and the lands of peoples' democracy alone. The personnel thus assigned often engage in consultation, present lectures and papers, and give technical assistance in the mastery of the production of new types of products and materials.

The mutual assignment of skilled personnel is preceded by preparatory measures. The participating parties agree on programs of work on calendar plans of operations, on routes to be taken through the country by various trains so as to permit the arriving personnel to study the questions of interest to them in planned fashion and in the most complete manner possible. Thus, the mutual assignment of personnel makes for the most rapid, flexible introduction of scientific and technological achievements and advanced experience in production into the socialist countries. We may cite the following example. A study by Hungarian specialists of the work of cellulose mills in the USSR resulted in the successful introduction in enterprises of the Hungarian Peoples' Republic of progressive Soviet experience in cooking sulfite pulp, yielding a saving of about one million forints per year.

The lands of socialism cooperate in the training of personnel of the native nationalities for various branches of the economy by the education of the citizens of the respective countries in higher educational institutions, by offering them the opportunity to gain practical experience and to improve their skills both in production and in research institutions. The Soviet Union, which has a first-class system of educational and manufacturing facilities, plays the leading role in this respect. 14,000 students and graduate students from the lands of peoples' democracy studied in the higher educational institutions of the USSR in 1958. From 1949 to 1958, a large number of foreign specialists and workers have undergone industrial and technical training and have gained practical experience in the USSR. The German Democratic Peoples' Republic, Czechoslovakia, and certain other lands of peoples' democracy are making a substantial contribution to the training of personnel for other countries.

The collaboration of the lands of socialism in the field of development of production, and the continuous technological improvement thereof, is intimately related with their collaboration in the field of science. The planned cooperation of similar research institutions and organizations for planning and design in the various socialist countries is taking on ever increasing significance in the most important fields of the economy — industry, agriculture, construction, transport, communications, etc. — as well as in various branches of science (physics, chemistry, geology, biology, economics, history, medicine, etc.). Experience shows that this new and creative form of collaboration in science and scientific technology, actively promoting the most rapid development of material and spiritual values, is most efficient. The time periods required to elaborate and resolve scientific and technological problems are substantially reduced. There is a considerable saving in the labor of scientific personnel, the experimental facilities are employed more rationally, as are test installations and specimen units, and the most correct methods are employed. The coordination of research work in the socialist countries makes for elimination of duplication in the elaboration of various problems, and permits utilization of the experiences of these countries in which the given problems have already been solved. For example, assistance by scientists of the Rumanian Peoples' Republic enabled Soviet scientists substantially to speed solution of problems of industrial production of acetylene from natural gas. In his speech at the May, 1958, plenum of the CC CPSU, Comrade N. S. Khrushchev congratulated the Rumanian scientists for their persistence. Another example, collaboration between Soviet and Czechoslovak research institutions resulted in an annual saving of about 6 million rubles in the USSR alone in the elaboration of a number of themes.

Collaboration has been established among approximately 600 research and designing institutions in the Soviet Union and the lands of peoples' democracy. Specifically, contractual agreement has been achieved on coordination of efforts in the joint elaboration of more than 1500 themes in the fields of science and scientific technology. We note that approximately 75% of the subjects concerned deal with metallurgy, the chemical industry, petroleum chemistry, power production, machinery manufacture, devices for automation and programmed guidance, instruction and the building materials industry. The scientific research institutions of

the Soviet Union and Czechoslovakia are conducting joint investigations in the field of production of organic intermediates and dyes, plastics, synthetic rubbers, artificial and synthetic staple fibers, the development of automatic lines and machine tools with programmed control, the manufacture of bearing alloys capable of withstanding high loads and temperatures, and the design of the latest types of medical instruments and equipment. Institutions in the USSR and Hungary are jointly engaged in investigations in the field of production of titanium by the magnesium and heat method, the development of fabrics from mixtures of synthetic, artificial and woolen staple fibers, and the preservation of foodstuffs by ionizing radiation. Institutions in the Soviet Union and Rumania are conducting joint work in the field of petroleum chemistry.

Successful collaboration of the socialist countries in the field of scientific technology is being pursued for joint study of natural resources. For example, the Soviet Union and Chinese Peoples' Republic are jointly studying the natural riches of the Amur Basin and are developing long-range projects for development of the productive forces of this district. Rumania, Poland, Czechoslovakia and the German Democratic Republic have combined their efforts for study and mastery of the natural resources of the Danube delta, and in the first instance, of the tremendous resources of reeds available in this area. Joint construction of a large-capacity paper and pulp combine in the city of Brailov (Rumania) to be in full operation in 1960 is being carried out for complex processing of these reeds into cellulose, artificial staple fiber, fabrics, paper, cardboard, furfural, and structural sheeting. A number of countries that are members of the Council of Mutual Economic Assistance are collaborating in establishing a unified system for utilization of the water resources of the Danube.

The socialist governments are systematically engaged in conducting conferences and meetings for joint discussion of pressing scientific and technological problems in the most important branches of the national economy, which are important to fulfillment of the national economic plans of the socialist countries. In recent years, scientific and technological conferences and meetings have been held on problems of mechanizing coal mining and labor organization in the mines, on instruments of thermal control and automation, on exchange of experience in the field of standardization, on process procedures in artificial staple fiber, on color television, on questions of corn growing, on the utilization of organic and mineral fertilizers in agriculture, on problems of vegetable and fruit growing, etc. As a rule, these conferences and meetings have developed recommendations on the introduction into production of scientific, technological and progressive practical achievements that have been successfully tested in practice. Methods and organization of further investigations of the questions under discussion have also been taken up.

A number of joint conferences and meetings of scientists of the socialist countries have been held in the fields of the natural and social sciences: biology, geography, economics, history, linguistics, etc. Thus, a meeting of the economists of the socialist countries discussed pressing problems of the political economy of socialism, problems of the world socialist economic system, and problems of the political economy of capitalism.*

The lands of socialism have established close collaboration in the field of joint investigations and elaboration of problems of nuclear physics and utilization of atomic energy for peaceful purposes. The combined Institute of Nuclear Investigations was founded in 1956. Its site is in the Soviet Union. Our country has transferred to that scientific institution, the Institute of Physical Problems and the Electrophysical Laboratory of the USSR Academy of Sciences, with the world's most powerful synchrocyclotron and synchrophasotron. The founders of the Institute are the eleven socialist countries, which concluded a corresponding agreement. Other countries endorsing the agreement may belong to the Institute, and may be accepted into membership by decision of a majority of its members.

The Soviet Union is extending major scientific and technological assistance to a number of the lands of peoples' democracy in the planning and construction of atomic reactors, cyclotrons and power plants, and is supplying them with various radioactive isotopes for purposes of investigation and medicine. Atomic reactors have been built with Soviet aid in China, Poland, Czechoslovakia, the German Democratic Republic and Rumania. Atomic power plants are being erected in Czechoslovakia and the German Democratic Republic.

Comrade N. S. Khrushchev has emphasized that the development of Soviet science and engineering is progressing in intimate coordination with the development of science and engineering in all the socialist countries, and that brotherly mutual assistance and skillful coordination of the joint efforts in this direction will make for an even greater flourishing of scientific and technological thought.

The leading role in the scientific and technological collaboration of the lands of socialism is played by the Soviet Union, which has scored gigantic triumphs in the development of its economy, science and technology. The outstanding achievements of Soviet scientific and technological thought are testified to by such historic triumphs as the creation of the world's first atomic power plant, ballistic rockets, the development and launching of the world's first satellites, and an artificial solar planet.

The seven-year plan for the development of the national economy of the USSR in 1959-1965 is a new and significant stage in the world economic competition of the two systems — the socialist and the capitalist. In 1965 our country will exceed the current level of production in the United States in a number of very important fields, and will approach that level in other fields. The grandiose plan for the further uplift of the economy of the USSR opens new and truly remarkable prospects for the development of the economic, scientific and technological collaboration of the socialist powers, and this will make for a fuller revelation of the advantages inherent in the world system of socialism and will accelerate progress in each socialist country.

The Soviet Union is extending brotherly assistance to the lands of peoples' democracy in the field of economics and science and technology. Some 600 major industrial projects have been built and are being built in the lands of peoples' democracy with the all-round assistance of the USSR. In designing these projects, and in providing assistance in construction, in assembly of equipment, in starting operations and in training engineering and technological personnel, as well as workers, the Soviet Union reveals its latest achievements in the fields of science-technology and progressive production experience to the lands of peoples' democracy.

Our country is exchanging various types of technical documentation with the peoples' democratic governments. The technical emphases in the Soviet documentation made available to the lands of peoples' democracy reflect the needs of their economies, and primarily the need to develop heavy industry. The preponderance of the

* See Problems of Economics Number 12, 1957, pages 90-104 and Number 2, 1959, page 156 (Russian Edition).

documentation transmitted by the Soviet Union to the lands of peoples' democracy is in branches of heavy industry: manufacture of machinery, ore mining, metallurgy, power, fuel, and the chemical industry. We note that more than half of the Soviet documentation made available to these countries falls into the field of manufacture of machinery, primarily the manufacture of machine tools.

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Transmission of Technical Documentation by the Soviet Union to the Lands of Peoples' Democracy

Most important types of technical documentation	For total period of scientific and technological collaboration (1947-1958)	Of which, 1957-1958
Plans for major construction	2,300	700
Documentation for manufacture of machinery, equipment, apparatus and instruments	6,750	2,930
Processed documentation	2,570	950
Total	11,620	4,580

In turn, the achievements of the lands of peoples' democracy in the field of machinery manufacture, the technology of production processes in the chemical, gas and other branches of heavy industry, as well as in the light and foodstuffs industries, are of interest to the Soviet Union. 70% of all the documentation obtained by the Soviet Union from the lands of peoples' democracy falls into group A.

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Technical Documentation Received by the Soviet Union from the Lands of Peoples' Democracy

Most important types of technical documentation	For total period of scientific and technological collaboration (1947-1958)	Of which, 1957-1958
Plans for major construction	170	100
Documentation for manufacture of machinery, equipment, apparatus and instruments	1,600	790
Processed documentation	1,300	540
Total	3,070	1,430

The data on exchange of technical documentation between the USSR and the lands of peoples' democracy show that about 80% of the total mutual exchange consists of Soviet technical documentation. This indicates the broad utilization of the experience in production and in scientific technology accumulated by the Soviet Union, by the lands of peoples' democracy. At the same time, the exchange of documentation between the Soviet Union and such industrially developed peoples' democratic countries as the German Democratic Republic and Czechoslovakia is virtually equal on both sides, testifying not only to the wide utilization of Soviet scientific and engineering achievements by these countries, but to the extensive utilization of the achievements of the German Democratic Republic and Czechoslovakia in the national economy of the Soviet Union.

The fraternal collaboration of the Chinese Peoples' Republic and the USSR may be witnessed in all branches of the national economy without exception, in all fields of science and engineering, this being an expression of the fact that the economies of these two great socialist powers, with their vast resources and possibilities, are developing in all possible directions. The scientific and engineering collaboration between the USSR and the Chinese Peoples' Republic plays a leading role in scientific and technical collaboration among countries in the socialist camp.

Peoples' China, in close collaboration with the Soviet Union, is creating a powerful modern industry (metallurgical, machinery manufacturing, mining, power, chemical, etc.). Our country is providing technological assistance to the Chinese Peoples' Republic in the construction of hundreds of industrial projects. The Soviet Union is delivering equipment, needed planning, technical, and process documentation, is providing assistance in construction, and training personnel for these enterprises. A great number of these projects have already gone into operation. Substantial assistance in the construction of projects for its national economy is being given to China by other socialist states. On its part, China and the other socialist countries are making a significant contribution to the industrial development of several lands of peoples' democracy in Asia.

The scientific and technical collaboration of the USSR and the Chinese Peoples' Republic is being carried out to

an ever greater degree on the basis of long-range long-term plans in specific subject areas. The first such plans were developed at the sixth meeting of the Sino-Soviet Commission on Scientific and Technical Collaboration in July, 1957, and embraced 19 branches of industry. In January, 1958, an agreement on joint investigations into 122 most important problems in the field of science and technology was concluded between the Academy of Sciences of the USSR and the Academy of Sciences of the Chinese Peoples' Republic.

The utilization of Soviet production experience and scientific and technological achievements in China is of major importance in accelerating economic development of the country. Soviet technological documentation and Soviet specialists have assisted China in mastering the production of more than 200 types of new metal-working machine tools, 900 types of metallurgical and mining equipment and products of the machinery-manufacturing industry, 1400 types of products of the electrical manufacturing industry, and more than 100 types of transportation machinery. The technical assistance of the Soviet Union has enabled China to learn to make steam turbines of 12,000 kw capacity and hydraulic turbines of 16,000 kw capacity, complete equipment for mines producing 600,000 tons of coal per year, etc. 6,300 persons from the Chinese Peoples' Republic were trained in the higher educational institutions of the USSR from 1951 to 1956. During its first five-year plan, more than 7,000 Chinese specialists and practical workers familiarized themselves with achievements in various fields of production in our country.

In the course of their scientific and technological collaboration, the European lands of peoples' democracy have given substantial assistance to the Chinese Peoples' Republic in the development of machinery manufacture, the metallurgical and chemical industries, in carrying out geological prospecting, and in particular prospecting for petroleum and gas. In turn, Peoples' China is transmitting to these countries the experience it has accumulated in the light and handicraft industries, in agriculture and irrigation, in construction and medicine. The achievements of the Chinese working people in a number of these fields is also utilized by the Soviet Union. The Chinese Peoples' Republic has transmitted to other countries in the socialist camp, including the Soviet Union, thousands of specimens of valuable varieties and grades of agricultural crops.

The economic and scientific-technological collaboration with the Soviet Union and other industrially developed countries of peoples' democracy on the part of those states in the socialist camp which were weakly developed economically under the conditions of capitalism and were agrarian, raw material-producing appendages of the imperialist powers, makes for rapid development of their economies, and the creation of modern industrial production therein, particularly in branches of heavy industry.

The Albanian Peoples' Republic is establishing and developing its mining, electric power, metal-working, woodworking, light and foodstuffs industries in accordance with its natural resources and economic needs as well as with due consideration of the needs of other countries of the world socialist system, with the brotherly assistance of the Soviet Union. During the years of peoples' power that republic has built hundreds of new industrial enterprises, has mastered the production of many new types of industrial products previously imported. Today, the country manufactures as much industrial produce in three weeks as it had produced in all of 1938. The Soviet Union has granted to Albania without recompense plans for copper mines, coal mines, plants for the manufacture of building materials, working drawings for the manufacture of various industrial products, as well as extensive process documentation. The Soviet Union has given the republic significant technical assistance in introducing the advanced experience and mastering the production of new types of industrial products. The socialist countries are assisting Albania in improving its agriculture, one of the most important branches of its economy. The close economic and scientific-and-technological collaboration with the Soviet Union and a number of other lands of peoples' democracy is facilitating the rapid development of the economy of Bulgaria, which is entering the stage of completion of the building of socialism. In 1958, the level of industrial production in this country was almost 9 times as high as in 1937. A chemical industry, a machinery-manufacturing industry, metal-working industries and a number of other branches of industry have been established in this republic. With the assistance of the fraternal countries, Peoples' Bulgaria has mastered the production of several hundred new types of machines and equipment. The socialist reorganization of agriculture, which is the major branch of the country's economy, has been completed. The production of the equipment, fertilizers, and means of agricultural pest and disease control required by its agriculture has been organized in Bulgaria.

In the years of peoples' power, the Rumanian Peoples' Republic has become a country of mixed industrial and agricultural economy. Its industrial production has now multiplied almost four-fold by comparison to the pre-war level. Rumania today possesses not only a rapidly developing petroleum industry, but a modern petroleum refining, petroleum chemical and chemical industry. Petroleum equipment, machine tools of various types, tractors, automotive vehicles, locomotives and about 900 types of electrical equipment, more than 80 grades of steel, more than 50 different items of farm machinery, etc., are now produced in the republic. Major triumphs have been obtained in the socialist reorganization of agriculture.

In 1950-1957, the Rumanian Peoples' Republic has utilized the scientific and technological experience of other socialist countries in 2,198 subject areas and has transmitted to these countries its own experience in production and scientific technology in more than 1,500 subject areas. The Soviet Union has assisted Rumania in solving more than 900 problems in science and technology. Our country has given Rumania working drawings for the production of heavy equipment for blast furnaces and steel foundries, construction equipment, machine tools of various types, textile machinery, steam turbines, etc. The republic has also received from the fraternal countries documentation with descriptions of process procedures for the manufacture of various chemical products, including dyes, plastics, rubber and medicines. Hungary has transmitted to Rumania its experience in the production of diesel engines of 450 horsepower, and self-propelled railway units with internal combustion engines of 1,200 horsepower, while Czechoslovakia has provided its experience in the manufacture of precision machine tools, pumps, and high pressure compressors. Rumania has provided Hungary and the German Democratic Republic with technical documents for manufacture of bearing-producing equipment and has given Czechoslovakia documents on various types of petroleum equipment.

Its all-round collaboration with the Soviet Union is of much significance to the Hungarian Peoples' Republic. The largest new construction project of Peoples' Hungary, which is being carried out with the brotherly assistance of the Soviet people, is the Danube metallurgical plant. The USSR has not only provided complete equipment for this plant, but has assisted in developing the plan for it and in carrying

out the construction, installation of equipment, and launching of operations. About 100 Hungarian specialists have acquired practical experience in the USSR at the largest metallurgical enterprises. Utilization of Soviet technological documentation and the assistance of Soviet specialists has made possible the erection of a blast furnace of 700 cubic meters' capacity in Hungary, mastery of the production of caterpillar tractors, of self-propelled combines, of bearings, and the erection of a mercury rectifier factory. Peoples' Hungary has employed the experience of the USSR in the field of aluminum, petroleum, and the sugar industry, in the production of sulfuric acid, ammonia, polethylene, sulfite cellulose, in agriculture and in irrigation and drainage. The Hungarian press has printed striking examples of the economic efficiency of scientific and technological collaboration with the Soviet Union. Thus, the mastery in Hungary with the assistance of the USSR, of the production of bearings has already yielded economies of more than 40 million forints. Introduction of the Soviet method of extracting alumina from bauxites yielded a saving of 5 million forints during the first year.

The collaboration of the industrially developed peoples' democratic countries with the Soviet Union and each other facilitates reorganization of the structure of industry established in the period of capitalist development, the creation of new branches of industry, and the organization of manufacture of new types of products in accordance both with the needs of the given nations, and with the interests of all the countries of the socialist camp.

Among the socialist states, the Czechoslovak republic is first in production of pig iron, steel, cement, products of the machinery-manufacturing industry, and industrial consumer goods per head of population. As a result of the successful execution of socialist transformations in the industry and agriculture of Czechoslovakia, this country has entered the period of completion of the upbuilding of socialism. With the assistance of the fraternal socialist countries, and of the Soviet Union in the first place, the manufacture of equipment for the mining of coal and ores, for the chemical industry, for foundries, and of heavy forging and pressing equipment, and welding machinery has been created and is developing. The manufacture of mobile power plants installed on trains, of heavy cranes, and of instruments for regulation and automation of various processes of production has been mastered. There has been a considerable increase in the production of new types of rolling mill equipment, heavy machine tools, turbo compressors, electrical instruments for super high voltages, agricultural machines, medical equipment and new types of consumer goods. The Czechoslovak republic has exchanged approximately 700 sets of technical documentation with the Soviet Union. According to the calculations of Czechoslovak economists, the results of the utilization of Soviet production and engineering experience have benefited the economy of the republic to a total of some billions of crowns. The production experience of the working people of Czechoslovakia is being utilized ever more widely in the Soviet Union. The introduction of Czechoslovak recipes for synthetic enamels into the Soviet industry in place of the nitro enamels previously used has saved some tens of millions of rubles. The saving at the Gorky auto works each year has been 8 million rubles as a result of improvement of process procedure and reduction in the consumption of organic solvents of which there is a shortage. The Czechoslovak method of making cast dies by forming from molten metal is being successfully introduced at heavy industry enterprises of the USSR. This cuts the labor expenditure by a factor of 6 to 10 and doubles the life of the dies. Czechoslovak craftsmen have taught their progressive methods of finishing apartments to hundreds of construction workers in Moscow and Leningrad. The use of these methods has enabled the Glavmosstroy alone to save more than 10 million rubles in the course of a year.

The German Democratic Republic, with its highly developed machinery-manufacturing, and chemical industries, and its production of precision mechanical and optical products, has made a major contribution to the scientific and technological progress of all countries in the socialist camp. Recently, scientific and technological collaboration in the chemical industry has been progressing with particular speed among the USSR, the German Democratic Republic, and Czechoslovakia.

The Polish Peoples' Republic has established intimate scientific and technological collaboration with all the countries of socialism, giving it the possibilities successfully to develop the metallurgical and chemical industry, the production of various machine tools and equipment, the manufacture of automobiles, tractors, and other products. Employment of Soviet technological documentation has enabled Poland to organize production of more than 100 types of machines and equipment, including high-power steam engines and turbines, coal-mining combines, metal-cutting machine tools, agricultural machines, equipment for chemical plants, etc. The Soviet Union, in turn, employs the industrial experience of the Polish Peoples' Republic in the coal industry, the production of mining equipment, of railway rolling stock, and of certain types of chemical products.

The German Democratic Republic and Czechoslovakia gained from Poland its experience in the field of ore mining, metallurgy and chemical production, and construction. Poland utilizes the achievements of the German Democratic Republic in tool making, the automotive and tractor industry, the production of textile equipment, and the scientific and technical experience of Czechoslovakia in rolling metal and in making certain types of metallurgical equipment. The experience of the Hungarian working people is utilized by Poland in the machinery-manufacturing, the chemical, and the light industries, and that of the Rumanian working people in the petroleum and construction industries.

Recently, collaboration in the scientific and technological area among the Korean Peoples' Democratic Republic, the Democratic Republic of Vietnam, the Mongolian Peoples' Republic and other countries in the socialist camp has expanded substantially. In March, 1959, a Soviet-Korean agreement was signed on technical aid by the Soviet Union to the Korean Peoples' Democratic Republic in the construction and expansion of a number of industrial enterprises. Our country is providing the Korean Peoples' Democratic Republic with technological assistance in erecting a 200,000-kw thermal electric power plant, enterprises to manufacture ammonia, polychlorviyl, flax spinning and wool spinning and weaving mills, and also in the expansion of the Kim Chak iron and steel mill, and the Pyongyang silk spinning and weaving mills. The total value of shipments of Soviet equipment and other types of technical aid envisaged by the agreement comes to about 500 million rubles and will be paid for by the Koreans in shipments to the USSR of Korea's normal export commodities. The Korean Peoples' Democratic Republic, progressing on the basis of the successes achieved in the training of native engineering and technical personnel and in the development of industry, machinery manufacture in particular, is itself preparing some of the plans and equipment for these enterprises. The Soviet Union is granting licenses, descriptions of process procedures and other technical documentation

necessary for getting production under way at these enterprises, without charge.

Thanks to the close collaboration and the scientific and engineering mutual aid and cooperation, new branches of the economy have made their appearance in the lands of peoples' democracy, large industrial and other enterprises have been built, the production of many types of new products and materials has been mastered, and skilled personnel for various branches of the economy have been trained. All this has made it possible for the peoples' democratic governments more completely and rationally to employ their natural resources and production capacities, to expand and improve the structure of production and to increase its volume steadily. Those peoples' democratic governments that had previously been economically underdeveloped have established the basis of native heavy industry, and have become combined agricultural and industrial or industrial and agricultural countries. As concerns the countries that had had large-scale industry under capitalism, they have, in the years of the upbuilding of socialism, developed their industrial production at rates incomparably more rapid than before, have carried out a radical reconstruction of the departmental and intra-departmental structure of industrial production, particularly of heavy industry, including the manufacture of machinery. In all the socialist countries, a constant increase in the material well-being and cultural level of the working people is provided for.

In 1956, the Council of Mutual Economic Assistance proceeded, on the suggestion of member states, to examine problems of coordinating the development of the fundamental branches of the economies of the member states, to examine problems of intergovernmental specialization and coordination of production. For the purpose of elaborating proposals along these lines, the Council has established permanent agencies — multi-partite commissions on economic and scientific-and-technological collaboration, consisting of highly-skilled specialists from the member states, in the field of industry (machinery manufacture in particular), agriculture, and other branches of the national economy. The conference of representatives of Communist and workers' parties of states members of the Council of Mutual Economic Assistance, participated in by representatives of the Communist Party of China, the Labor Party of Korea, the Mongolian Peoples' Revolutionary Party and the Vietnam Labor Party, held in Moscow in May, 1958, examined problems of further development of economic collaboration among the socialist countries on the basis of a consistent realization of the international socialist division of labor, rational specialization and coordination of production. The conference directed attention to the need for all-out development of the raw-material producing branches of the national economy and of power production, as well as that of further development of, and introduction of the latest technology. Particular attention was given to the need for further improvement in the coordination and specialization of machinery manufacture, creating the possibility of conversion to a more advanced kind of mass and large-scale serial production, permitting a sharp reduction in production expenditures per unit product produced. Comradely coordination of the plans of the socialist governments as they pertain to interrelated branches of the national economy, intergovernmental specialization and cooperation in production, represent a specific expression of the further development and deepening of the international socialist division of labor.

Comradely coordination of long-range plans of development of interrelated branches of the economy of the socialist countries requires the planning of new measures in the field of scientific and technological cooperation over a long term, concentration of attention on solution of the major questions of science and technology, and on planned mutual utilization of scientific and technological achievements and progressive production experience. Improvement in the scientific and technological collaboration of the socialist countries will proceed in the direction of improving its flexibility and expanding the planned collaboration among scientific, and planning and designing organizations.

The grandiose tasks ahead of the world camp of socialism define the ever increasing role of scientific and technological collaboration in the continuous economic progress of all the countries of socialism, and in the further development and reinforcement of the world socialist economic system.

P. Oldak

Modern Capitalist Theories of the Economic Cycle

Today, capitalist economics gives particularly great attention to problems of capitalist reproduction and crises. The growing economic contradictions of capitalism in the period of its general crisis have a direct influence upon the treatment of these problems.

The majority of contemporary capitalist theories of economic crises are closely related to Keynesianism. As we know, Keynes advanced a theory which, without touching the foundations of the capitalist economy (private ownership of the means of production and the profit motive as the motive force of capitalism production), claimed to be able to extract capitalist society from the catastrophes of crises and unemployment. The active interference of the capitalist states in economic life, control over private investments, increase in government investments and, above all, in expenditures upon military production should, in the opinion of the Keynesians, provide a stable economic prosperity and the attainment of what is termed full employment.

The idea that government investments can serve as a means of overcoming crises and eliminating unemployment is based on the concepts of the multiplier and the accelerator. Capitalist economists use the term multiplier to designate a factor reflecting the relationship between growth of investments and increase in national income, and by accelerator they mean the ratio between change in consumption and change in investment volume.[1] These relationships, taken by themselves, that is, outside of relationship to the false reflection they obtain in the works of capitalist economists, have a definite and real meaning. This meaning resolves itself to an examination of one of the factors in the process of expanded reproduction, to wit, analysis of the influence of growth of production upon the national income, the total demand, and, as a result thereof, on the given effect of the latter, in turn, upon the scale of production and employment, or in other words, upon analysis of what is called the secondary effect.

Today, analysis of the secondary effect is not only of theoretical, but of substantial political and practical significance. The vast expenditures of modern capitalist governments upon militarization of the economy, and the definite influence exerted by militarization upon the form of development of the economic cycle (the possibility of some inhibition of onset of the crisis phase) advances the necessity for special investigation of the question of what is the actual role of government investments and what influence they may have upon economic activity. It is also to be observed that analysis of the process of development of the secondary effect is of definite significance for study of the socialist economy.

Capitalist economists, because of the apologetic nature of their theories, and the erroneous subjectiveness of their methodology, have been unable to provide a scientific solution of the problem of the role of this effect in the process of capitalist reproduction. The Keynesian theory of the multiplier and accelerator reflect a content consisting of real economic processes in an obviously mystifying form. A critique of this theory must demonstrate the failure of the efforts of capitalist economists to provide an analysis of the current problems of capitalist reproduction and, in particular, their efforts to find a panacea to save them from crises and unemployment in the phenomena of the secondary effect. At the same time, such a critique could serve as a point of departure for a broad and truly scientific analysis of the role of the secondary effect under the conditions of contemporary capitalism, as well as its role under the conditions of socialism. The latter must obviously be the subject of special investigations.

The origin of the capitalist theory of the multiplier which dates from the thirties is directly related to the work of Kahn and Keynes. In 1931, Professor Kahn published an article titled "The Relationship of Internal Investments to Unemployment," in which he attempted to clarify the relalationship between government expenditures for public work and the general level of employment. In the opinion of R. Kahn, all supplementary expenditures by the government, including expenditures for public works on a large scale, give rise to what is termed primary employment and thus increase the income of a specific number of workers and office workers. The expenditure of this income, in turn, is the source of a new, secondary employment. A tertiary, quaternary, etc., employment may arise in the same way. Kahn believed that it was possible to calculate the total magnitude of employment, if we know what portion of the income received will again be expended. The greater this percentage, the higher the multiplier, that is, the coefficien by which the primary employment has to be multiplied in order to obtain an idea of the total magnitude of employment.

Keynes made use of this idea of Kahn. In his work, The General Theory of Employment, Interest and Money, he asserted that employment is not determined by the level of wages, but depends upon the anticipated expenditures by society for consumption and upon the sum expended by society in new investments. The initial investment may give rise to a succession of expenditures leading to increase in employment and income. To explain the influence of government expenditures upon employment, Keynes deemed it necessary to define a coefficient reflecting the ratio between increase in investments and increase in income. "For each given set of conditions," he wrote, "there may be established a definite ratio which should be termed the multiplier, between income and investment and, if we simplify somewhat, between total employment and employment directly related to investment."[2]

If the multiplier be designated by the letter k, increase in investments by ΔI, and the increase in income by ΔY, the ratio may be expressed as follows: $\Delta Y = k\Delta I$.

The question arises as to how to define k, and upon what this coefficient depends? Keynes asserted that the magnitude of the multiplier k depends upon the "maximum propensity to consumption," that is, upon the ratio of increase in consumption to increase in income. The increase in income (ΔY), falls, in his opinion, into two portions, the sum expended upon supplementary consumption — the increase in consumption (ΔC) and the sum expended upon additional investment — increase in investments (ΔI). Consequently,

$\Delta Y + \Delta C + \Delta I$.

The ratio $\Delta C/\Delta Y$ is, according to Keynes, the index of ultimate propensity to consumption, which "tells us how the current increase in production will be divided between consumption and investment."[3] If the ultimate propensity to consumption is .9, this means that .9 of each unit of increase in income is expended upon consumption. If this indicator is unity, this means that the entire increase in income goes to consumption. However, if it is zero, this means that the total increase in income is directed to investment. As Keynes regarded that portion of income not going to consumption as savings earmarked for investment, he derived another indicator, "the ultimate propensity to savings," simultaneous with the indicator of ultimate propensity to consumption. This indicator is a $1 - \frac{\Delta C}{\Delta Y}$ (if the ultimate propensity to consumption is .9, the index of ultimate propensity to savings will be .1).

Further, Keynes uses simple algebraic operations to derive a relationship between the ultimate propensity to consumption and the multiplier. $\Delta Y = k\Delta I$, and consequently, $k = \frac{\Delta Y}{\Delta I}$; $\Delta Y = \Delta C + \Delta I$, from which $\Delta I = \Delta Y - \Delta C$. Let us substitute a new value for ΔI in the formula $k = \frac{\Delta Y}{\Delta I}$. Then, $k = \frac{\Delta Y}{\Delta Y - \Delta C}$. If the numerator and denominator of the fraction are now divided by ΔY, we arrive at the following index: $k = \frac{1}{1 - \Delta C/\Delta Y}$.

Thus, according to Keynes's treatment, the multiplier is unity divided by unity minus the index of the ultimate propensity to consumption. As $I = \frac{\Delta C}{\Delta Y}$ is the index of ultimate propensity to savings, the multiplier is therefore the inverse of the index of ultimate propensity to savings. If, for example, it is known that the ultimate propensity to consumption is .9, and the ultimate propensity to savings is .1, the multiplier will be 10. Thus, the total employment due to supplementary investment (for example, public works conducted by the government), would be ten times as great as the initial employment to which the initial investments have given rise.

In Keynes's opinion, "the effort of the public to use a portion of its rising income will stimulate production to the point at which the new level (and new distribution) of incomes creates possibilities for savings corresponding in scale to the increased investments. The multiplier shows the degree to which employment has to rise so as to give rise to an increase in real income sufficient to stimulate the required additional savings, and it is in a functional relationship to the psychological tendencies of the public."[4]

Subsequently, the bourgeois economists Machlup, Clark and Samuelsen attempted to examine the concepts of the multiplier with consideration for the time factor, that is, the fact that some days, weeks or even months elapse between the first and second increase in income. This time lag depends upon the following factors: a. the number of persons through whose hands the sum of money passes before its appearance as a second wave of income;[5] b. on the rapidity with which each of the groups noted expends the income received, and c. upon the rapidity with which the demand of wholesale and retail merchants and capitalist entrepreneurs will react to the increase in demand.

Some economists, striving to allow for these factors, propose to examine the process of expansion of demand and volume of production, and introduce the concept "period of analysis." Usually, they examine, as the period in question, the interval between two consecutive high and low points in the monetary balances of individuals, firms, or the economy of the country as a whole. In this case, the period of analysis is also termed the income period (for those who receive weekly wages or salaries, the income period is one week).[6] On the basis of these definitions, bourgeois economists introduce the concept of "savings" and then examine the relationship between savings and investments. The magnitude of a single day's saving is defined as the income earned the previous day minus the expenditures for consumption made during that day. As far as investments are concerned, they are defined as the sum of the expenditures of the given day for commodities for production (that is, for means of production). From this it follows that investments (I) may be equal to savings (S), but may also be either greater or less than savings. I is greater than S if the expenditures upon commodities to be used for purposes of production are made not only from current income but from the issuance of additional money or from the utilization of funds previously accumulated. If I is less than S, money reserves will grow. The excess of investments over savings is erroneously identified by Robertson, as by many other economists, with inflation, and an excess of savings over investments with deflation. In actuality, if the increase in the mass of money in circulation (when I is greater than S), will be accompanied by a corresponding increase in the volume of production and commodities offered for sale, no inflationary price rise will exist. Simultaneously, there will be no deflationary processes if the increase in monetary resources (when I is smaller than S) is accompanied by a corresponding limitation of the volume of production and of commodities offered for sale.

In analyzing the effect of the multiplier principle, Keynes examined the relationship between the magnitude of the national income and of government expenditures only in connection with the degree to which these expenditures resulted in an increase in consumption. This posing of the question was subjected to criticism even by a number of capitalist economists. "Utilization of the multiplier in its usual sense," wrote Samuelsen, "could not claim to reflect the relationship between the magnitude of the national income due to government expenditures and the initial magnitude of monetary expenditures."[7] In Samuelsen's opinion, this was explained by the fact that the effect upon the national income of the derivative private investments due to increase in the demand for consumer goods was usually left out of consideration. In order to overcome this shortcoming, it was proposed to combine analysis of the effect of the multiplier principle with analysis of the effect of the accelerator principle.

As far back as 1910, in his work Periodic Crises of Overproduction, Aftalion noted that during the period of industrial boom, production of means of production and production of durable consumer goods was stimulated to a considerably greater degree than production of soft consumer goods. As a result, the prices of raw materials and equipment rise more rapidly during the period than do prices of consumer goods. In turn, during the crisis stage, prices and volume of production of means of production drop more rapidly than do prices and volume of consumer goods. This was the basis for the formulation of the principle of the accelerator, in accordance with which the change in demand and the volume of production of consumer goods has the propensity of causing a multiple change in the demand and volume of production of means of production.

In order to demonstrate the mutual effect of the two principles — the multiplier and the accelerator — upon income and upon employment, Samuelsen proposed a new formula for the national income. "Increase in national

income includes three components: 1. government deficit financing, 2. private expenditures upon consumption due to prior government expenditures, and 3. derivative private investments which, in accordance with the principle of acceleration, will increase in a definite proportion to the rise in consumption."[8]

Later works by a number of economists showed the fact that these formulas for national income and employment were lacking in foundation. In deriving their own formulas, Kahn, Keynes and Samuelsen proceeded from the hypothesis that there must be some single multiplier, the magnitude of which remains constant over a given period of time. This hypothesis, in turn, was based on the assumption that, "the propensity to consumption," is constant in character and is capable of calculation.

"The propensity to consumption" (like all the other "propensities") is a completely arbitrary psychological category and for this reason alone, in our viewpoint, is scientifically without foundation. It should be remarked that a number of capitalist economists who have attempted to examine the problem of consumption in somewhat greater detail (Kuznets, Dusenberry, Tinbergen, etc.) were very soon compelled to recognize that "the propensity to consumption" lacks constancy and is incapable of being measured exactly. To begin with, it varies from country to country and is completely different from class to class and in various groups of society. It is by no means identical in town and city, varies significantly in time (as between period of boom and depression), and is obviously different in terms of different commodities. Statistical calculations showed that change in incomes is expressed primarily in the "propensity" to the consumption of goods that are not objects of prime necessity. The demand for foodstuffs is less elastic, and that for luxury goods is most elastic.

However, the level of employment and the national income do not depend only upon the share of increase in income expended upon consumption, but upon a number of other factors, for example, upon price dynamics, upon the degree of elasticity of various branches of production, upon interest rate, expected increase in profit, etc. Consequently, it will be necessary to calculate not one, but several different multipliers. Moreover, as was asserted by certain critics of Keynes (for example, Pigou), investments induce very different changes in different branches of industry. In other words, here, too, there is no single multiplying factor.

Thus, even if we omit the sociological and methodological aspects of this question (of which we will speak separately), it must be recognized that the Keynesian theory of the multiplier and accelerator will not withstand scientific criticism if only due to the simple fact that they are built on a false concept of the existence of some uniform "propensity" to consumption and a uniform multiplier. The formulas of Keynes and Samuelsen prove to be completely unsuited to determine the real dynamics of national income and employment. Nevertheless, the idea of calculating a multiplier continues to remain popular. Considering the multiplicity of the ties determining the level of the national income, and certain other "variable" magnitudes, bourgeois economists today strive to give a broader interpretation to the concept of the "multiplier." The multiplication factor, it is suggested, should be calculated every time that "the question arises of the influence of results of change of a single variable to another under conditions in which a functional relationship exists between them."[9]

Despite all efforts to renovate and correct their analysis, the bourgeois conceptions of the multiplier and the accelerator, which ignore the social side of the phenomena under examination and operate with artificial psychological categories, have nothing whatever in common with a truly scientific economic theory.

In plotting the theory of the multiplier and accelerator, the starting point was the concept of definite secondary effects in the process of expanded reproduction. The investment of additional capital gives rise to a wave-like expansion of demand, which, under certain circumstances, is capable of inducing a given wave-like expansion of production. This is termed the multiplication effect. How does it actually look in reality, and what are the limits of its activity? In the first place, it should be noted that the secondary effect involved in investment of supplementary capital is manifested not only in expansion of demand and production of consumer goods, but to an equal degree in expansion of the volume of production of means of production and the demand for these commodities. The partisans of the multiplier theory, following the dogma of Smith, ignore constant capital. This is one of the reasons for the incorrect idea of the possible dimensions of the secondary effect.

Let us pursue the movement of funds expended by a capitalist state in financing what are called public works. The first to receive these funds are the capitalist entrepreneurs who organize these works. They spend a portion of the funds thus received upon purchase of means of production and upon hiring labor. The rest they regard as income for their enterprise. Let us assume that the income acquired by the capitalists, and the wages paid out to the workers, are completely expended upon consumption (in Keynes's opinion this means that the maximum propensity to consumption is unity). In this case, the first wave of money will be expended completely upon acquisition of means of production and means of consumption. The money reaches the hands of the merchants. If one proceeds from the assumption that the merchants increase their orders to industry in proportion to the volume of additional commodities sold (the fact is that the money received can also go in other directions, for example, to pay off debts), then this sum will go into the hands of industrialists. The moneys expended upon acquisition of consumer goods will pass through yet another hand, that of the wholesaler.

To what degree, will the first wave of money reach the industrialist? What additional expansion of production will this induce? What will be the relationship of the secondary increase in production to the magnitude of the initial investment, and how will this be reflected upon the volume of employment? Even the most general analysis of conditions and contradictions of capitalist reproduction show that the magnitude of the secondary effect depends upon a number of factors, the majority of which prove to be factors weakening or paralyzing its action (in the first place it must be borne in mind that increase in demand may, within certain limits, be satisfied without expansion of production, out of available commodity resources). At the present stage of capitalist development, this factor plays an ever greater role. Doubtless, an increase in the amount of unsold commodities counteracts the effect of multiplication. If the sum of the government's expenditures upon financing of public works constitutes merely a small portion of the cost of the commodities not sold, it may be stated with confidence that the additional demand will be lost in a sea of supplementary offerings for sale and will not give rise to a secondary expansion of production, and consequently to an increase in employment. But even if the magnitude of the government expenditures is considerable, the presence of unsold commodity resources seriously weakens the possible secondary expansion of production. The greater the ratio between the cost of the

eserves and the magnitude of the initial investment, the reater is the inhibiting influence of unsold commodity supplies.

Further, within given limits, the increase in production ay be realized without an increase in employment, and ith a very small increase in wages. If the increase in demand will be so great that, despite the presence of a given ass of unsold commodity resources, it will still induce he capitalists to expand production, there can be no doubt hat at the outset they will try to increase production without additional capital expenditures and without engaging dded workers. The chronic underutilization of productive apacity and mass unemployment in the period of the general crisis of capitalism, as well as the reserves of growth f intensity of labor open substantial possibilities for expanding production without engaging additional labor in roduction and, consequently, with a very small increase in age payments. In this situation, the secondary expansion f production will not induce any serious increase in demand for consumer goods. The multiplication effect will ave a noticeable influence only upon the raw-material-roducing branches of industry.

It may, finally, be hypothesized that increase in demand ill be so considerable that it will require the construction f new enterprises and result in a more or less significant ncrease in employment. However, in this case too, the increase in employment will be substantially less than the increase in total volume of production. One cannot ignore, s do the supporters of the multiplier theory, the influence f growth in the organic composition of capital, the relative eduction in the share of variable capital in the total volume f social capital as a whole. All this tells us that increase n employment will progress in diminishing ratio to the ise in volume of production.

Under modern conditions, the rise in automation of production causes this process to be felt with particular force. Thus, in the oil refining industry of England, production ultiplied six-fold from 1948 to 1955, but employment only oubled. In the United States electronics industry, production rose 275% from 1947 to 1952, but the number of workers and office personnel increased only 40%.[11]

Thus, even under optimum conditions, when the second xpansion of production involves construction of new or expansion of old enterprises and the hiring of additional workers at these enterprises, the increase in employment will e very limited and the wave of demand to which the second xpansion of production has given rise, will be considerably maller than the first wave.

Under the conditions of modern capitalism, increase in onopoly domination is a serious factor counteracting the econdary expansion of production. From the point of view f the monopolies, it is often more profitable to sell a mited number of commodities at artifically inflated rices, than to expand production. A significant factor ounteracting secondary expansion of production may also e an influx of foreign commodities into the internal market of one or another capitalist country. If the economy of e given country is not safeguarded by protectionist tariffs, e increase in demand will, to a greater or lesser degree, e satisfied by the sale of import commodities. In this ase, the secondary expansion of production in the branches the national economy of the given country will be even wer.

Approximately the same may be said about the effect of e accelerator principle. Expansion of production in any eld, and not merely in the fields of department II (as is eld by the partisans of the accelerator theory), if it cannot e brought about by more complete utilization of available productive capacities, will inevitably require such initial capital expenditures as will be several times greater than the cost of the annual growth in production. This is due to the high organic composition of capital, and also to the fact that the expenditures of basic capital take place at once, when the enterprise is organized, and are amortized a little at a time. At the same time, the higher the organic composition of capital, the greater the increase in initial capital expenditures required for each percentage increase in volume of production. This relationship must be considered in analyzing the process of expanded reproduction. At the same time, it is necessary to note a number of factors acting in the opposite direction.

In the first place, it must be borne in mind that expansion of production may take place without installation of additional equipment. It has been found in practice that it is possible to increase production virtually without any additional capital investment at all by increasing the rate of operation of the machines and cutting down idle time. Under the conditions of contemporary capitalism, it is necessary to consider, not only this fact, but the influence of the chronic underutilization of the production apparatus. At the present time, the production capacities of American industry are utilized only to 70% of their possibilities, and in some branches of industry this figure is even lower. With this enormous excess of production capacity, the increase in production, unless it involves conversion to a new technological level of production, will induce virtually no substantial increase in demand for new equipment.

Under the rule of monopolies interested in maintaining high prices, and in the face of the competition by foreign firms delivering equipment to a market of a given country, the influence of the acceleration effect will be diminished even further.

As the result of the factors noted above, this effect is hardly felt at all in periods of crisis and depression, but can be an influence in a period of industrial boom, when expanded production proceeds on the basis of installation of new and more highly productive equipment, that is, as the result of transition to a new level of development of the forces of production.

Thus, it may be asserted, that merely as a result of ignoring a number of important factors influencing the scale of the secondary effect, the capitalist theory of the multiplier and accelerator presents a false picture of the nature of the processes occurring. But this is not the main thing. The fundamental methodological error of the capitalist theory of the multiplier and accelerator, lies, as does that of the entire Keynesian analysis, in the fact that the capitalist economists attempt to reduce the complex social problems of that economy to artificial mathematical equations. The process of capitalist reproduction is examined as though bourgeois society contained no antagonisms, class struggle, acute social conflicts, as if there were nothing more than some interrelated mathematical magnitudes: incomes, expenditures, savings, investments, etc.

The schema of the capitalist economists, analyzed above, have nothing whatever in common with reality, which is determined by the nature of capitalist production relationships and their inhibiting effect upon the development of the forces of production. The incomes and expenditures of the various classes and groups in bourgeois society are not passive mathematical magnitudes. Various elements of national income are deeply antagonistic to each other in this society. The increase in surplus value, for example, is possible only by reduction in the share of the working class in the national income. This results in the irreconcilable struggle between labor and capital, the class struggle,

without analysis of which no scientific cognition of the nature of capitalist reproduction is possible.

Nor can one forget that a ferocious war of competition hides behind the concept of profit itself. In the epoch of imperialism, the problem of markets has become vastly more acute, and competition has taken on a particularly fierce character. There is a constant struggle within the monopolies, among monopolies, between monopolies and the outsiders, and among the group of monopolists of the various countries.

The profound class antagonisms of capitalist society have given rise to the contradictory nature of these "interrelated categories," which the economists of the Keynesian school attempt to operate with: the category of total income, total savings, total investments, total consumption, etc. In refusing to analyze the internal contradictions of the capitalist method of production, the bourgeois economists have closed the road to scientific cognition of the real process of capitalist reproduction and contradictions between the conditions of production and the conditions of sale. This common error of capitalist political economy has found reflection in their conceptions of the multiplier and the accelerator.

The bourgeois theories of the multiplier and accelerator are built on utilization of "psychological categories." The insubstantiality of such a category as the ultimate propensity to consumption has already been discussed above. Equally erroneous are the other "psychological categories" employed in Keynesian doctrine: ultimate tendency to savings, the drive to investment, the preference for liquidity.

In reality, there is no extra-historical propensity to savings nor any law that this propensity increases with increase in income, which Keynes formulates as "fundamental psychological law." The low level or even absence of savings among working people is due not to "psychological laws" but to the incontestable fact that under capitalism, the wage of the majority of the working population is lower than the minimum needed to live. The savings of the middle strata in capitalist society are a consequence not only of their higher incomes as compared to that of the working class, but primarily of the extraordinary instability of their position in society. As far as the high level of "savings" of the capitalist class is concerned, this too is no simple derivative of magnitude of income. A substantial portion of these "savings" consists of nothing other than the excess capital characteristic of the period of the general crisis of capitalism. The competitive struggle driving capitalists to keep a portion of their capital in liquid form plays a specific role in this respect.

Substitution of abstract mathematical formulas built on the utilization of erroneous "psychological categories" for analysis of the real relationships and contradictions of capitalist reproduction predetermines the lack of scientific basis for the bourgeois concepts of the multiplier and accelerator.[12] Rejection of analysis of the many-faceted factors influencing the progress of the secondary effect, has been the reason for the unjustifiably exaggerated view held by bourgeois economists of the Keynesian school of the role of this effect in the process of capitalist reproduction.

Decisively rejecting the erroneous bourgeois conceptions of a multiplier and accelerator as unscientific, one must, however, note that the very idea of analysis of the phenomena of the secondary effect is deserving of attention. The question of the need for analysis of this effect has long since been posed in Marxist economic literature. In his Theories of Surplus Value, Marx presents direct indications of the need to consider the influence of changes in production in certain branches upon the dynamics of other branches of industry related thereto. Unfortunately, in recent years, analysis of the phenomena of the secondary effect, which exists both under conditions of capitalist and socialist reproduction, has not been given the necessary attention.

The conceptions of the multiplier and accelerator have been utilized by economists of the Keynesian school for "theoretical rationalization" of programs to combat depressions. The schematic calculations of the effects of the multiplier and accelerator principles seemed to show the possibility of manifold increase in income and employment. It is not surprising that bourgeois economists hoped to utilize the working of these principles in fighting economic crises and unemployment.

Of course, if it is possible to produce a significant secondary effect, then even small government investments would be adequate to induce a multiple expansion of production in branches of industry in department II, and this in turn should result in a multiple expansion of production in branches of department I. This induces a new demand for consumer goods, etc. In other words, governmental expenditures are held by the partisans of this theory to serve as the stimulus making it possible to overcome the state of crisis in capitalist economy.

Bourgeois authors hold that the sphere of application of government investments is of no significance in itself. These investments may be directed to fulfillment of any desired public works — be they nonproductive or even completely unnecessary to society. What is important is only that they not be made in fields affecting the application of private capital, as this would increase overproduction in these fields. "... The object of the expenditures," writes G. Haberler, "must be selected in such fashion, and the policy must be carried out in such manner, as to avoid unfavorable effects upon the propensity of private persons to investment ... The policy of government expenditures must not result in an increase in the costs of production. If these conditions are met and measures are carried out on a large scale (in other words, if the volume of expenditure is adequate to overcome the existing obstacles), the object upon which these governmental expenditures are made are completely immaterial."[13] Keynes is even more definite in this respect: "The erection of pyramids, earthquakes, even wars may serve to increase wealth..."[14]

The bourgeois economists' appeal to increase nonproductive, and in particular, military expenditures, is in essence a recognition of the fact that the capitalist system is incapable of normal economic development, and that a conscious dissipation of and destruction of a portion of the national wealth is regarded as an essential condition to the achievement of complete employment. But are these not recognitions of the historical bankruptcy of the capitalist system?

The erroneousness of the capitalist conception of the multiplier and accelerator predetermines the inadequacy of the "recipe" for overcoming economic crisis and elimination of unemployment by means of government investments. Under the conditions of the general crisis of capitalism, when a substantial portion of the apparatus of production is chronically under-utilized, unemployment and unsold commodity surpluses are great, the secondary effect of government expenditures is so small as to have no serious influence upon the capitalist economy. This was clearly evidenced by the experience of the public works and deficit financing in the United States in the 1930's.

The obvious failure to overcome the crisis of 1929-1933 by utilization of the concepts of the multiplier and accelerator was met by an effort on the part of certain bourgeois

economists, including Keynes, to explain this on the grounds that the policy of deficit financing was allegedly conducted on too limited a scale. In their opinion, the error of the Roosevelt administration lay in the fact that the country's annual deficit was three billion dollars, and not ten or fifteen billion.[15] This position is in essence a poorly concealed recognition of the erroneousness of the initial conceptions. As a matter of fact, if the principles of the multiplier and accelerator result in a multiple and significant increase in demand, then even small initial investments are capable of assuring a progressive increase in demand, income and employment, and this should make it possible to overcome the economic crisis.

Experience shows that deficit financing, no matter how great its volume, does not resolve and cannot resolve the problem of economic crises, as the essence of crisis is not at all some accidental lack of effective demand for commodities. No factors of artificial expansion of demand for consumer goods and capital goods can overcome the cyclic nature of capitalist production, inasmuch as they do not affect the profound internal contradictions which give rise to economic crises. Economic crises are an inevitable product of the capitalist system of production. The vast and ever increasing military and other governmental expenditures after World War II also proved incapable of overcoming cyclic fluctuations in capitalist production. During the last ten years, the United States has gone through three depressions: industrial production dropped 10.5% in 1948-1949, 10.2% in 1953-1954, and in April, 1958 (the crisis having begun in September, 1957), the volume of production was 14.3% lower than in December, 1956.

Life has demonstrated the absurdity of theories of crisis-free development of capitalism and the futility of efforts to overcome economic crises within the framework of the capitalist system of production. Thereby, historical experience reveals the unscientific nature of capitalist political economy and its latest offspring, the conceptions of the multiplier and accelerator.

FOOTNOTES

1) The terms "multiplier" and "accelerator" are taken from technical literature. Today they can be encountered in the works of many foreign economists engaged in economic statistics, in problems of interrelations among branches of the national economy, and also in the area of the general theory of reproduction.

(2) J. M. Keynes, General Theory of Employment, Interest and Money, Gosinoizdat, 1948, page 108.

(3) Ibid., page 110.

(4) Ibid., page 112.

(5) At least four groups may be named here: the workers engaged on public works; the retail merchants from whom these workers purchase consumer goods; the wholesale merchants of consumer goods; the capitalists who produce consumer goods, expand the production thereof, and pay wages to workers and office workers.

(6) Robertson has suggested the use of a short analysis period and takes it, arbitrarily, that the income assumed during the given period ("today"), will be expended only during the subsequent period ("tomorrow"). Such a period may, of course, be considerably longer than one day. In practice, its duration depends upon the established customs and techniques of payment. Simultaneously, Robertson proposes differentiating between earned income and income on hand. Today's income on hand is yesterday's earned income. In turn, the income earned today will be income on hand (allocated for expenditure) only tomorrow.

(7) Readings in Business Cycle Theory, Philadelphia-Toronto, 1944, page 261.

(8) Readings in Business Cycle Theory, page 263.

(9) E. James, The History of 20th Century Economic Thought, Paris, 1955, page 493.

(10) Labor Capital TUC Magazine, September, 1956.

(11) (Automation in the Machine Industries), International Organization, Geneva, 1956, page 50.

(12) Our objection is, of course, not to utilization of methods of mathematical analysis to investigate economic phenomena, but to the extensive dissemination in contemporary bourgeois economic literature of a tendency to substitute abstract mathematical calculations for analysis of the complex processes of capitalist reproduction reflecting the profound internal contradictions of capitalism.

(13) G. Haberler, Prosperity and Depression, Geneva, 1941, page 504.

(14) J. M. Keynes, The General Theory of Employment, Interest and Money, page 124 (Russian Edition).

(15) Readings in Business Cycle Theory, page 284.

T. Zaslavskaya:

Guaranteed Monetary Wages on Kolkhozes

Through the years of their existence, the kolkhozes have travelled a great and glorious road. The size of the average kolkhoz has increased several times; the standards of the technical equipment of kolkhoz labor have risen immeasurably, as have also those of worker qualifications and skills; farm administration by management and agricultural specialists has been expanded. During this time, the forms taken by wages have also changed repeatedly. At the present time, an increasing number of kolkhozes are beginning to introduce guaranteed monetary remuneration for kolkhoznik labor. Establishing fixed rates for labor directly in monetary form, the kolkhozes at once credit wages earned to the account of the individual kolkhozniks and pay them out in full each month, without recourse to the trudoden [Work-day: unit of work on kolkhozes. Transl.] Thus, the view that the trudoden is a category peculiar to the kolkhoz system at every stage of its development, is refuted by practice.

The initial measure of labor and the final measure of consumption are the same on kolkhozes as in any other type of socialist enterprise, although on kolkhozes, these two measures are related by an intermediate measure of distribution — the trudoden. The necessity for such a supplementary measure of distribution on kolkhozes grew out of the weak development of the social economy and the low ratio of commodities to total output.

On economically backward kolkhozes the level of real income depends to a considerable degree on climatic conditions, and is hence rather unstable. At the same time, the kolkhoz, being a cooperative enterprise, receives no State subsidies for wage payments in years when the crops are bad. When the necessary reserves are lacking, it is unable to guarantee its workers an adequate fixed wage, much less pay it as soon as it is earned. These are the conditions which necessitate the trudoden as a special measure simultaneously reflecting the quantity and quality of kolkhoznik labor. It reduces the individual factors of quantity and quality of labor to one unified quantitative index of simple, homogeneous labor. And the combined data on the quantity of simple work put in during the year by each kolkhoznik enable the kolkhoz to distribute the income earned according to work done, whatever its real level may have been.

The necessity for the trudoden was also due to the low ratio of commodities to total production output and, in particular, to the weakness of commodity relations between kolkhoz and kolkhozniks.

It is known that the sovkhozes and cooperative industrial artels produce large marketable surpluses. The bulk of their production is sold for money. And money is also used to pay for the labor of the workers, whose needs are satisfied by purchases of goods in stores or at the market. Kolkhozniks, on the other hand, get the greater part of their food provisions through distribution on the basis of the trudoden, and also from their own subsidiary farm plots. True, the share of natural produce in total trudoden payments is diminishing from year to year. But as late as 1956 it comprised a USSR-wide average of roughly 50 per cent, and was even higher in many oblasts and republics. These conditions have rendered more difficult the transition to monetary payment for work done. A substantial increase in the ratio of commodities to total production output, a regular and adequately high monetary kolkhoz income, a reduction of payments in kind to a scale commensurate with the practical needs of the kolkhoz family and a substantial growth in the monetary incomes of kolkhozniks, were needed if this transition was to be effected.

The introduction of new planning procedures, the alteration of the system of farm produce purchases by the State, the reorganization of the MTSes and the reinforcement of the kolkhozes by trained chairmen and specialist staffs have brought about qualitative changes in the kolkhoz economy. There have also been changes in wage payments: their level has risen and yearly fluctuations have become less pronounced. The creation of transitory reserve funds and the extensive development of regular advances have introduced an element of predictability to kolkhoznik wages; the share of monetary payments in trudoden remuneration is greater everywhere and is rising with each passing year. The kolkhozes have consequently begun the creation of conditions for a change-over to the more progressive monetary form of wage payments.

At the present time, individual kolkhozes compensate the labor of their kolkhozniks in various ways. On some, the income that has been actually accumulated at the end of the year is distributed on the basis of the trudoden; others provide guaranteed payments for trudodens worked and yet others have gone over to guaranteed monetary wage payments. Each of these forms of labor compensation has its own distinctive features.

In payments for labor on the basis of the trudoden, the work done is computed on a running basis in physical units (hectares, cart-loads, sheaves, quintals) and in trudodens. The fund of individual consumption is fixed after obligations to the State have been settled, funds expended in production have been replaced and a certain portion of the income has been set aside for replenishment of the kolkhoz funds. Part of the fund for individual consumption is set aside for bonuses and the remainder is distributed in accordance with the number of trudodens worked. Under this system, the trudoden is an active instrument of distribution according to work done.

Under the second form of payment, the running work record is kept in the same way, but the fund for distribution by work done is formed differently. More highly developed social management and good production and financial planning permit the payment of monthly wages to kolkhozniks at a pre-determined, planned level. This means that the wage fund does not accumulate spontaneously or as a residue, but as a quite autonomous quantity, determined by the trudoden payments planned for and the number of accredited trudodens. Accordingly, the earnings of each kolkhoznik also depend on only one factor — his labor contribution to the work of the artel. Standing as the expression of a determinate value (i.e., a determinate quantity of products and money), the trudoden is transformed from a highly effective instrument for the distribution of income into a formal unit which, in essence, is duplicated by money, thereby losing its independent significance. Therefore, the

guaranteed wage gradually diminishes the necessity for the trudoden. For example, in 1956, the "Hammer and Sickle" kolkhoz, Moscow oblast, introduced the payment of guaranteed monetary wages to kolkhozniks at 10 rubles per trudoden. At first, trudodens worked were credited to the kolkhozniks and then the amount of their final cash earnings was arrived at by multiplying the trudoden total by 10. Obviously, it was very soon decided, for simplification, to credit 10 rubles to the kolkhoznik directly, instead of one trudoden; 15 rubles instead of 1-1/2 trudodens, 150 rubles instead of 15 trudodens and so forth, i.e., to base reimbursements for work done directly at monetary rates.

Under the guaranteed monetary wage system, the running record of work done is governed by output norms and by fixed rates applicable to their fulfillment. But, unlike the two preceding cases, rates are set not in terms of trudodens, but directly in money. Some kolkhozes stick to the existing 9-category scale in which the highest category is 5 times larger than the lowest; others replace this by a 5 or 7-category scale with a lowest-to-highest ratio of 1:4 or 1:3. For example, on the "Komsomolets" kolkhoz, Kiev oblast, rates on norms for the performance of individual jobs range between 8 rubles 30 kopeks and 20 rubles 72 kopeks; on the "Put' Lenina" (Lenin's Road) kolkhoz, Moscow oblast, from 7 rubles to 30 rubles; at the "Druzhba" (Friendship) artel, Leningrad oblast, from 7 rubles 50 kopeks to 25 rubles; on the "Bolshevik" kolkhoz, Khmelnitskaya oblast, from 12 to 24 rubles and so forth. In cattle-raising and vegetable-forcing gardening, rates are usually pegged to the quintal of output produced. Under such a system, the wage fund accumulates as the sum of all monetary credits entered on the kolkhoz's books during the year. Earnings are paid out each month and, as a rule, in full.

When, in the transition from distribution of actual income on the basis of the trudoden to guaranteed payment of trudodens worked, the very nature of the relationship between kolkhoz and kolkhozniks changes, then the replacement of trudoden payment by monetary wages leads above all to the perfecting of the nature of that relationship. The guaranteed monetary wage is, as it were, the logical outcome of all the progressive changes in the distribution of kolkhoz incomes that have taken place over the last years.

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It is a characteristic feature of the socialist mode of production that it harmoniously combines the social and private interests of the workers. Production is being constantly developed and improved in our country to subserve the interests of the human being: to raise his standard of living, to give fuller satisfaction of his material and cultural needs, to emancipate women from stultifying household duties, and to create all necessary conditions for the genuine realization of the potentialities of each individual human being. The paramount goal and powerful motivating force of socialism is the consistent satisfaction of the growing needs of the society as a whole, the growing material welfare of the workers on the basis of the uninterrupted development and perfecting of industrial and agricultural production through the application of all the latest, most advanced scientific and technical innovations.

The correct dovetailing of social and private interests is to be achieved through the strictest adherence to the Leninist principle of giving the workers a material stake in the results of socialist production.

During the first post-war years, this principle was badly weakened in kolkhoz practice. Starting with 1953, the Party instituted several measures aimed at reviving it: the prices of agricultural produce were raised, kolkhoz production planning procedures were changed, more comprehensive rights were granted to kolkhozes in respect of wage rate and scale fixing and the determination of forms of bonus awards, the State purchasing system was changed, etc. The kolkhoz economy was considerably strengthened as a result of these measures, and the well-being of the kolkhozniks was improved. The total of payments in kind and in money for trudodens worked increased, in terms of comparable prices, from 47.5 billion rubles in 1952 to 83.8 billion rubles in 1957, and rose even higher in 1958. Besides, the kolkhozniks received an additional 3 billion rubles thanks to the abolition of deliveries of agricultural produce from their private farming plots. Average real income per employed kolkhoznik went up 60 per cent between 1952 and 1958.

One of the important factors contributing to the powerful advance of agriculture has been the increase in the material stake of the kolkhozniks in the development of the social economy. Even now, however, there are still shortcomings in the application of this principle on kolkhozes. The great, new tasks assigned to agriculture by the XXIst Congress of the CPSU require that the system of wage payments on kolkhozes be further improved, and that the personal stake of each kolkhoznik in the results of his labor be enlarged. Experience has demonstrated that, at the present time, the form of work compensation which most effectively encourages the kolkhoznik to work hard is the guaranteed monetary wage.

Under the usual system of income distribution in accordance with trudodens worked, the wages of the kolkhozniks are not related to the work-time he actually puts in and they remain undetermined until the end of the year, with the result that the material stake of the kolkhozniks in the results of their labor is diminished. The kolkhoznik merely knows how many trudodens he has accumulated, but no one can say in advance what real income he will receive for these trudodens. The level of work remuneration is dependent on many factors: the yield of any given crop, the quantity of the products turned over to and sold to the State, the feed requirements of kolkhoz livestock, the relative importance of the various channels for the realization of marketable produce, etc. Trudoden payments are subject to yearly fluctuation in many artels for lack of well-adjusted planning. Under the guaranteed monetary wage system, by contrast, the kolkhoznik knows the size of his income in advance, expressed in terms of money. Monetary wages are paid out not at year-end, but after the monthly totals have been added up, which enhances their guaranteed quality.

Many artels which have changed over to this form of labor compensation settle accounts with their kolkhozniks each month, paying them their earned wages in full. In other cases where income receipts are sharply affected by seasonal variations and available cash reserves are short, 70-80 per cent of the total credited earnings are paid out each month, the remainder being paid at the end of the year.

The material situation of the kolkhoznik can be evaluated correctly by comparing his monetary wage with the earnings of workers at neighboring enterprises. For example, at the "13 Let Oktyabrya" (13 Years Since the October Revolution) artel, Moscow oblast, the average monthly earnings of the kolkhoznik during 1957 amounted to 646 rubles, which roughly corresponds to the average wage level at industrial enterprises in this region. At the "Moskva" kolkhoz, Tadzhik SSR, they exceeded 1,100 rubles, and on the kolkhozes of the Tapa raion, Estonian SSR, they amounted to 777 rubles.

That the stake of kolkhozniks in the results of their labor is increased by the guaranteed monetary wage, is attested

to by many facts. The previously mentioned "13 Let Oktyabrya" kolkhoz, prior to the institution of this form of wage payment, was obliged each year to appeal to enterprises for assistance during the harvesting period, but each year the harvesting work fell behind schedule all the same. In 1957, after the introduction of monetary wage payments, the harvest was gathered by the efforts of the kolkhozniks themselves in a short time and with no waste.

Whereas earlier it had cost a considerable effort by kolkhoz brigades and chairmen to institute the individual piecework system, today the kolkhozniks themselves are beginning to ask for individual work records. At the same time, they do their best to do each job with as few other workers as possible. At the "Bolshevik" artel, Khmelnitskaya oblast, after monetary wages were introduced, in the threshing of corn by a complicated threshing machine, 15 women were replaced on the rick by 5 men. When they had mastered the operation, they arrived at the conclusion that three of them were enough to handle it. The result was that labor productivity rose sharply, and the earnings of each worker climbed to 40 rubles a day. On the same kolkhoz, the stable-hands demanded that their work load be increased from 10 to 18 horses.

On the "Put' Lenina" kolkhoz, Moscow oblast, after the introduction of monetary wages, 40 young persons with 7-10 years of education were taken on as hands during 1958 alone. At the "Kolos" artel, Zagorsk raion, same oblast, more than half of the milkmaid personnel was renewed by the taking on of new young people.

The attitude of the kolkhozniks towards their own private farming plots is also changing. The guaranteed monetary wage is graphically convincing them that work in the social farming of the artel is more profitable, and more promising for the future, than on their small-scale, inefficient subsidiary farms. At the previously mentioned "Put' Lenina" kolkhoz, more than half the cows of subsidiary farming plots have been returned to the community herd. The kolkhoz sells its kolkhozniks milk at 1 ruble 70 kopeks a liter. But families who have surrendered their cows to the kolkhoz get from 500 to 1,000 liters of milk at 1 ruble per liter. With the reduction in the scale of subsidiary, personal farming, new labor resources are released for more productive labor on the fields and farms of the artel.

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Many kolkhozes have long known the superiority of guaranteed monetary wages over the usual distribution according to trudodens worked. Hence the widespread practice of monetary payment at fixed rates for performance of critical kolkhoz jobs. For example, as early as 1956 the kolkhozes of South Kazakhstan paid cotton-picking at fixed cash rates for each kilogram gathered, without troubling to compute the trudodens involved. Many kolkhozes outside the black-earth belt have been paying their herdsmen, milkmaids, chauffeurs, mechanics and other worker categories in cash as a matter of practice. Lacking the capacity to guarantee wages in all their operations, economically weak kolkhozes have attempted to adopt a fixed monetary wage system in, at least, the most important areas of their production.

The practice of "partial" monetary payment, however, applied conjointly with compensation on the basis of trudodens, differs fundamentally from the payment of monetary wages throughout the kolkhoz economy. Enhancing the personal interest of the kolkhozniks in the performance of more "profitable" jobs, it severs the connection between the measure of labor and the measure of consumption which is a necessary condition of socialist distribution in accordance with work done. The trudoden remains the one single universal measure of labor in this case, based as it is on the system of output norms and labor rates. However, only part of the income received is involved in equal distribution by trudodens. The other part, often a substantial sum, is set aside for incentive purposes in relation to specially singled out types of work, which hampers the correct organization of production and provokes legitimate discontent among kolkhozniks engaged in less "profitable" activities. This leads in the long run to higher pay for other jobs by debasing their norms and enhancing their value in trudodens, which impairs the system of social evaluation of the individual job.

The farm-wide guaranteed monetary wage is based on the system that has been established for standardizing and scaling jobs. At the same time, it not only does not weaken the connection between the measure of labor and the measure of consumption, but actually renders the connection direct and immediate.

Where income is distributed on a trudoden basis, the labor performed by the kolkhozniks has to be correctly appraised, primarily to ensure their interest in getting every single job done. That is the sole important significance of such an appraisal to the kolkhoz since, regardless of the number of trudodens that may be recorded on the farm, the system of income distribution by trudodens secures a mechanical balance between the incomes and expenditures of the enterprise. This leads to an incorrect expenditure of trudodens at many artels. The practical result is that even the disbursement of petty cash is encumbered by special documents and, at the same time, many thousands of rubles are paid out for non-productive, superfluous and, at times, even for unperformed jobs.

In the compensation of labor at pre-established rates, the appraisal of the social usefulness of the kolkhoznik's work on the basis of output norms and the scale coefficient stands for the disbursement of a quite specific sum of money. Any overexpenditure of funds due to errors in the fixing of work rates and scales and to non-productive disbursements may bring the kolkhoz into serious financial difficulties. Consequently, business losses can only be avoided if the monetary value of the work of the kolkhozniks is consonant with the real income received by the artel from the performance of a specific job. This is due to the fact that when kolkhozes change over to the monetary wage system, they devote a tremendous amount of attention to the fixing of work rates and scales. As a rule, such a changeover is preceded by a review of all output norms and scale rates in force at the artel. In most cases, new norms are established on the basis of scientific methods of technical job standardization: the photographing of the working day, time studies of individual operations and others. The extent to which untapped reserves of increased labor productivity may be discovered from the application of these measures can be judged from the experience of the Kirov kolkhoz, Kaluga oblast. Establishing technically valid standards for 50 basic jobs, this kolkhoz economized more than 30 thousand trudodens.

Work estimates are also being adjusted in cattling. In their efforts to establish a direct connection between the wages of labor and its productivity, kolkhozes are reducing the number of indices on which the wages of cattle-breeding workers are based, and are crediting them with wages corresponding exclusively to what they actually produce. Thus, on the "Komsomolets" kolkhoz, Kiev oblast, where the monetary wage system was introduced in 1957, milkmaids earn wages on the basis of 100 fat units, swineherds on the basis of 1 kilogram of litter from sows and so forth. No credits are granted on this artel for care and

naintenance of animals.

Transportation work is paid by kilometer-tons of hauled oad, whereas, earlier, payment was frequently based on he number of carloads or trips. Kolkhozes are also re-ecting such inaccurate indices of performance volume as heaves, shocks, and hectares of harvest land exclusive of he harvest itself.

All this will lead to greater accuracy in the measurement f kolkhoz labor, to a reduction of non-productive expendi-ures, to an increase in labor productivity and to low unit osts.

The establishment of a firm procedure for fixing work ates and scales is an important condition for the introduc-on of a guaranteed wage. Trudoden credits based on low tandards and high rates constitute one of the chief causes or faulty trudoden compensation on economically weak olkhozes. For example, at the "Bolshevik" kolkhoz, Sumy blast, monetary wages are paid at 10 rubles per trudoden; t the "Rodina" (Homeland) kolkhoz, Smolensk oblast, trudo-en remuneration in money and in kind amounted to 6 rubles 4 kopeks. It would seem that this artel is less able to rovide guaranteed wages. But a comparison of the output tandards in force at these kolkhozes reveals that the pay er unit of concrete work is even higher at the "Rodina" olkhoz. For sacking 1 ton of grain, the "Bolshevik" kol-noz credits 2 rubles and the "Rodina" kolkhoz 6 rubles and 4 kopeks; for sorting out 1 ton of seed potatoes, 3 rubles 3 kopeks and 4 rubles 45 kopeks respectively; for loading ton of potatoes on trucks, 2 rubles 50 kopeks and 4 rubles 5 kopeks; for cutting 1 quintal of seed potatoes, 1 ruble 43 opeks and 3 rubles 16 kopeks; for the vernalization of 1 n of seed grain, 2 rubles 86 kopeks and 5 rubles 40 ko-eks; for the platform drying of 1 ton of grain, 2 rubles and rubles 34 kopeks, and so forth. By pegging its output orms to the normal level, the "Rodina" kolkhoz could guar-ntee its kolkhozniks wages that were not only not lower, t were even higher than on the "Bolshevik" kolkhoz.

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An important advantage of the monetary wage consists in at it permits the reduction of all forms of kolkhoznik in-me to one comprehensive and summarizing index, pro-des a more accurate common measure of the earnings of dividual worker categories and a means for establishing e conformity of these earnings to work actually perform-. By means of monetary wages, therefore, the principle distribution based on work done can hence be more con-stently applied.

It is almost never possible to effect a changeover to onetary wages on the basis of previously existing rates specific forms of labor. The conversion to monetary lues of earnings, actually received by kolkhozniks in the rious types of farm work, usually reveals grave job-eval-tion errors which, under the trudoden-compensation sys-m, had remained unperceived. For example, when the 3 Let Oktyabrya" kolkhoz was paying for work on the udoden basis, the actual earnings of a milkmaid were ur times higher than those of a woman engaged in field ltivation and working 24 days a month. After the change-er to the monetary wage system, female cultivators be-n to take in not less than 500 rubles a month, but milk-aids began getting 800-1,100 rubles.

The monetary incomes of kolhkoz management cadres e being adjusted. On kolkhozes where income is distri-ted on the basis of the trudoden, the earnings of this cate-ry are determined by various indices and made up from ny forms of payments in money and in kind. This dis-ises the unreasonably wide gap, prevalent at many kol-ozes, between the earnings of the artel chairman and the kolkhoz rank and file. At the Lenin kolkhoz, Smolensk oblast, the earnings of the kolkhoz chairman were more than 20 times higher in 1956 than the average earnings of the field cultivators. At the "Vlast Trude" (Power of Labor) artel, Orel oblast, the chairman's yearly income was 17 times higher than the yearly income of the average kolkhoznik; at the Khrushchev kolkhoz, Surkhandarya oblast, [on the Afghanistan border - Transl.] 10 times higher, and so forth. All these facts stand vividly revealed when all the forms of management personnel earnings are converted into money. In this connection, the system for management remuneration is being fundamentally reviewed. The wages of kolkhoz chairmen, accountants, specialists, and brigades in charge of fulfillment of product production plans in the different sectors of the kolkhoz, are being quantitatively established first of all. The over-all volume of production on the kolkhoz, by the brigade or in a specific sector of kolkhoz production, and the average earnings of the rank and file artel worker are taken as starting figures for the determination of the planned size of wages. Over the course of a year, the kolkhoz management personnel receive 60-80 per cent of the planned wage fund. But the final size of their earnings is determined at year's end, subject to the extent to which the farm production plan has been fulfilled. Special rates per quintal of produce are worked out for each worker category in such a manner that, if the plan is fulfilled 100 per cent, the sum of the credits is equal to the planned wage fund. If the plan has been underfulfilled, then workers' earnings decrease proportionately and, contrariwise, if it is overfulfilled, then they go up. Side by side with the volume of achieved production, many kolkhozes also take the level of its cost price into account. Such a system enhances the personal stake of the kolkhoz management personnel in the production of a maximum quantity of produce at a minimal cost in labor and money.

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One of the conditions for the successful operation of socialist enterprises is the introduction of cost accounting, the daily control of the work of each production department ruble by ruble. Only a consistent application of cost accounting methods can ensure the effective utilization of social labor, land, plant, materials, the rationalization of production by every possible means, and an increased production output at the same, or even at lower cost. Meanwhile, until very recently cost accounting had not been sufficiently widely practiced on kolkhozes. At the present time, the kolkhoz is the only type of socialist enterprise which by no means always confronts its incomes with its outlays and computes the costs, net profit and earning capacity of its basic production processes. When distributing real income by trudodens credited, the outlays involved in the production of this or that product are accounted for under two mutually exclusive indices: money and the trudoden. And, just as the final "cost" of the trudoden is determined only at year's end, the size of the expenditures incurred by individual brigades or kolkhoz sections throughout the production process remains, essentially, undefined, and the trudodens and monetary outlays involved can only be controlled separately.

Monetary wages facilitate the introduction of cost accounting in kolkhoz production, permit the reduction of labor and monetary outlays to a unified monetary expression and a confrontation of the enterprise's expenditures with its income. On the basis of expenditure data by brigades and kolkhoz sections, unit production costs, gross and net income and the earning capacity of production may be computed, and all these indices may be compared with planned

targets. The results obtained govern the distribution of bonus awards to the separate brigades and kolkhoz sections.

The size of final trudoden payments varies from one kolkhoz to another. On economically weak artels it frequently fails to cover the output achieved by the efforts of the kolkhozniks, whereas on more highly developed kolkhozes it also includes part of the surplus product. In this connection, actual trudoden compensation not always correctly reflects the amount of labor expended in the production of the compensated output. Consequently, cost values, which are calculated on the basis of the value actually ascribed to the trudoden, become incommensurable quantities from one kolkhoz to another. On kolkhozes where labor costs per production unit are lower than average, cost values, computed on the basis of factual evaluation, frequently turn out to be higher. This limits the possible utility of the index of factual cost prices. At the same time, when unit production costs are being computed on the basis of a conventional estimate (for example, the scales in effect at near-by sovkhozes), the real outlays of each kolkhoz are not taken into account. On artels where kolkhoznik wages are relatively low, the calculation of expenditures on the basis of a conventional estimate leads to the artificial generation of lesses in almost every sector of the kolkhoz, which hampers the analysis of the actual earning capacity of production. Thus, the computation of unit costs from a conventional estimate falls short of correctly reflecting the actual business position of the kolkhoz as stated in the current bookkeeping accounts.

When the monetary wage system is introduced, the disparity in the size of average trudoden pay from one group of kolkhozes to another disappears. Economically weak kolkhozes, where this pay has been low, are mobilizing all their internal resources, reviewing their job standards and scales and eliminating non-productive expenditures, and by this means are striving to hike the wages of their kolkhozniks up to the wage level prevalent on nearby sovkhozes. On the other hand, kolkhozes earning very high incomes are assigning only part of their planned distribution funds to the payment of steady monthly wages. The other part, often a sizeable amount, is set aside for use as incentive awards to crack brigades, to replenish provisional reserve funds, for construction for cultural and everyday purposes, and for other needs. The result is that the monthly wage levels of individual kolkhozes approach uniformity and the job of computing kolkhoz production costs is considerably simplified.

The combination of guaranteed monetary wages and internal cost accounting methods makes possible the improvement of material incentives to workers based on the final results of their labor.

The system of additional wages in kind and money for overfulfillment of the production plan contains a series of grave defects. The crediting of additional wages to the kolkhoznik, work unit or brigade according to each type of product is an autonomous operation, but the unified index of the productivity of their labor is not calculated. Hence the unwieldiness of the system of additional wages and the inaccurate evaluation of the labor performed by individual groups of kolkhozniks (for example, when a substantial over-fulfillment of the plan in some crops is accompanied by its underfulfillment in others). But when fixed monetary wages are paid and internal cost accounting records maintained, the results of the work of each work unit or brigade are evaluated as a whole.

Additional wage payments for overfulfillment of crop harvesting plans and for increasing livestock productivity awaken the interest of the kolkhozniks in increasing the volume of production but do not stimulate them to reduce costs. Where monetary wages are paid, the confrontation of a brigade's income with its outlays offers no particular difficulty. By pegging the size of material incentives to the extent to which the net income planned for is achieved, the kolkhozniks can be made to take an interest not only in expanding production, but also in a more economical expenditure of labor and money, in reducing unit production costs.

Under the former system of work compensation, materia incentives to kolkhozniks consisted to a considerable extent of payments in kind. Farm workers used to receive grain, potatoes, hay, and livestock workers milk, meat and young animals. Whenever additional wage payments were large, good kolkhoz workers had to spend much time and effort to sell the products they received, on the kolkhoz market. The distribution among the kolkhozniks of part of the net earned income eliminates this grave defect.

The system of additional work compensation does not cover all worker categories. But material incentives for good cost accounting indices are spread out to all workers in brigades, kolkhoz sections, subsidiary enterprises, semi-independent farms, etc.

So far only the first steps have been taken to implement guaranteed monetary kolkhoznik wages. In this connection the application of individual cost accounting units as incentive factors is far from an accomplished fact. On some kolkhozes, the fund of supplementary incentives to kolkhozniks is set up from that part of net income which is ove and above the planned figure. For example, on the "Moskv kolkhoz, Tadzhik SSR, the kolkhozniks of each cultivator brigade get 60 per cent of profits earned in excess of the amount planned while, if the planned profit figure has not been reached, 30 per cent of the unearned difference is withheld. Other kolkhozes, depending on the final results, also distribute part of the planned and earned net income.

The distribution of planned and excess net income (profits) among the spearate brigades is also accomplished in different ways, but always on the basis of the economic results of their work: the achieved output volume, expense incurred in its production, size of the net income, the level of labor productivity. Within the separate brigades, material rewards for final performance results are calculate on each ruble of the basic wage.

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Part of the output of the kolkhoz is distributed among the kolkhozniks in its natural state. Produce from the community farming sector is an important factor in the kolkho family budget. Some of these products (grain, potatoes, vegetables, etc.) are consumed as food by the kolkhozniks themselves, while others (straw, hay, silage) are used as feed for the kolkhoznik's privately owned livestock.

As the social sector of farming grows and the importanc of private, subsidiary farming diminishes, kolkhoznik demand for livestock feed will go down, but his dependence o artel farming for his supply of meat, milk, eggs, vegetable potatoes and fruits will increase all the more. The all-around satisfaction of the requirements of kolkhozniks in farm products is one of the important conditions for increasing their personal material concern for the development of the communal farming sector. Meanwhile, the dis tribution of a specific quantity of products in equal parts for each trudoden is not consonant with modern kolkhoz conditions. The fundamental defect of this form of distribution is its inaccurate consideration of the actual needs o this or that family. Let us suppose that 1 kg. of wheat is issued for each trudoden credited. This means that a family of 4 with one able-bodied member, and he employed as

a cultivator, receives 300-350 kgs. of wheat. An unmarried swineherd or milkmaid, on the other hand, can receive 900-1,000 kgs. and more. In one case grain requirements are undersupplied and in the other they are filled to excess.

Kolkhoznik discontent is also occasioned by the uneven quality of products issued per trudoden in the individual brigades, and also by the varying intervals at which they are given out, especially if these products are to be sold on the kolkhoz market. Cabbages or milk of the same quality, issued to the kolkhozniks at different times of the year, bring different prices on the market, with the result that the principle of equal pay for equal work is violated. At the present time kolkhozes, where income is distributed on the trudoden basis, are changing their procedure for supplying the kolkhozniks with products that their own efforts have generated. The entire income to be distributed in accordance with trudoden credits is issued in money, but the products are sold for cash or on monetary wage account at prices ratified in general assembly. This procedure for supplying produce to kolkhozniks is also followed where the monetary wage system is in force.

The practice of supplying kolkhozniks with produce on the basis of a buying and selling relationship accords with the interests of the kolkhozniks and of the artel itself. The question of how much of the income to spend on the purchase of products from the artel and how much to set aside for other purposes, is now being settled by each kolkhoznik. Buying and selling relationships permit a wider variety in the products that the kolkhoznik receives from the artel. It is known that many items of farm produce (early vegetables, berries, fruits, eggs and others) are produced to begin with, in small quantities, and, in the second place, long before the end of the year; and, furthermore, most of them cannot survive protracted storage. It is natural that such products are not, as a rule, distributed on the trudoden basis. But trading in them at the time of their harvest presents no problem whatever. The cash sale of produce to kolkhozniks accords well with the expansion of public dining facilities, the construction of kolkhoz bakeries and sausage plants, and the organization of domestic service shops. This form of relationship increases the importance of the collectivized farm sector in the economy of the kolkhoz family, strenghens the link between the kolkhoznik and artel operation and gradually lays the groundwork for the conversion of the personal, subsidiary plot of land from a source of supplementary income into a place where the kolkhoznik may work during hours when he is not working in the kolkhoz.

However, all the advantages enumerated can be realized fully on one condition — that correct prices be set for products sold to kolkhozniks. If these prices are low and, in particular, far lower than market prices, the kolkhoznik will be interested in acquiring as great a quantity of products as possible, and will then sell them on the market. In this connection, kolkhozes, having priced their produce on the basis of purchase prices or of unit production costs, are obliged to limit the quantities that may be purchased, in view of the incomes earned by kolkhozniks. For example, at the "Komsomolets" kolkhoz, Kiev oblast, the kolkhoznik may spend 10 rubles 80 kopeks out of every 100 rubles of income on produce, receiving 15 kgs. of wheat and 20 kgs. of hay in exchange. Purchases of produce are also limited at the "Kolos" (Wheat Spike) kolkhoz, Moscow oblast, at the Kirov kolkhoz, Kaluga oblast, and many others. When the prices of produce are set too high, the kolkhoznik will prefer to receive all his income in cash. The kolkhoz, however, cannot make enough money by selling its produce on the market. Taking this circumstance into account, many kolkhozes price their products close to the retail or the market rate, minus trade costs. At the "Serp i Molot" (Hammer and Sickle) kolkhoz, Moscow oblast, the kolkhoznik may buy produce in unrestricted quantities at state retail prices. The sale of surplus produce from private, subsidiary plots is also organized, being done through the kolkhoz. The "Druzhba" (Friendship) kolkhoz, Leningrad oblast and the "13 Let Oktyabrya" kolkhoz, Moscow oblast, sell their produce at market prices minus trade costs, and the "Pamyat Lenina" (Lenin's Memory) kolkhoz, Krasnodar krai, and others, sell theirs at retail prices. The qualitative changes in the system of supplying produce to kolkhozniks discussed above are taking place in all these artels.

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The transition to the guaranteed monetary wage constitutes a great step forward in the development of the production relations of the kolkhoz system. It opens up wide areas for the growth of the creative initiative of the kolkhozniks, for a new and steep upsurge of productive force on the kolkhoz countryside. At the same time, this is a fundamental advance in the process of bringing wages at state and kolkhoz enterprises into alignment. But the introduction of this form of work compensation demands considerable reconstruction of the entire organization of the collective sector.

The guaranteed monetary wage requires the planning of all aspects of kolkhoz economic activity, which means not only the quantity of output, but its unit production cost as well, and also the remunerativeness of every branch of the kolkhoz. With a realistic plan of monthly receipts and outlays that can be checked daily, the kolkhoz can determine in advance the sources it will draw on to pay out wages for each month of the year. In such cases when current receipts are not sufficient for the payment of wages in full, the kolkhozes secure advances from State purchasing agencies on the output of the given year, and also short-term loans from the Gosbank (State Bank).

Economically strong kolkhozes are not the only users of the guaranteed monetary wage system. Individual economically weak artels, which have been properly tackling the job of fixing job rates and planning their production, are also going over to monetary wages, and doing it most successfully, too. At the "13 Let Oktyabrya" kolkhoz, on the outskirts of Moscow, the milk yield per cow was 1,100 liters in 1954, and the potato and vegetable crop yield 35 quintals from 1 hectare. As a result of the introduction of monthly advances, then of guaranteed trudoden remuneration and, finally, of monetary wages, the milk yield here had risen to almost 4 thousand liters by 1958, and the potato and vegetable crop yields amounted to 150 and 200 quintals per hectare respectively, while the monetary income reached 4 million rubles. In 1957, the monthly earnings of the average able-bodied kolkhoznik rose to 646 rubles.

At most economically weak artels, however, the introduction of monthly monetary wages is an extremely complicated matter. If this form of remuneration is to extend its benefits to all the kolkhoz masses, the economic level of still backward artels will have to be raised. Now that the XXI Congress of the CPSU has assigned great new tasks to the agriculture of the country, the strengthening of economically weak kolkhozes can no longer be postponed.

The fixing of purchase prices for agricultural produce uniformly applicable to all kolkhozes within each zone will create favorable conditions for the development of weak kolkhozes. This does not, however, exclude a whole series

(Continued on Page 93)

O. Bogomolov, G. Gertzovich, A. Martyanov and I. Semenov:

A Compendious Work on the Socialist World Economic System

The Socialist World Economic System, Institute of Economics of the Academy of Sciences of the USSR, Gosplanizdat, 1958, 559 pp.

The principal feature of our age is the expansion of socialism beyond the boundaries of one country and its transformation into a world system. Whereas up to the second world war the Soviet Union, at the center of a hostile capitalist encirclement, had been the only country in which the ground was being broken for the building of a new society, today a mighty camp of socialist states has arisen, covering a territory equal to one fourth of the surface of the terrestrial globe and embracing a population of about 1 billion people. The triumph of socialism in a series of countries of Europe and Asia during the post-war period was a natural outcome of the entire course of historical development as governed by the laws of history. Total confirmation has been supplied to Lenin's brilliant anticipation that, in the age of imperialism and under the action of the law of the unequal economic and political development of capitalist countries, the revolutionary movement of the proletariat and of the popular masses would lead, not to the sudden and total collapse of imperialism but to the gradual falling away of one country after another from the capitalist system.

The historical experience of the formation and development of the world system of socialism is enriching Marxist-Leninist theory. The combination of the Marixt-Leninist theory of communist construction with the concrete practice of the socialist transformation of society under the specific conditions of one country or another, the principles and forms of rational division of labor among the socialist countries, the trends and rates of development of the basic branches of the economy, primarily industry, of individual countries within the socialist world system, the economic problems of the socialist world market — such are the new problems which have been posed by life itself and are being successfully solved by the Communist and workers' parties of the countries of the socialist camp.

The work under review subjects the problems of the socialist world economic system to many-sided scrutiny. Economists from all the countries of the socialist camp took part in its preparation: Kh. Mara (Albanian People's Republic), T. Chernokolev (Bulgarian People's Republic), I. Frisch (Hungarian People's Republic), Bui Cong Chyng (Democratic Republic of Viet-Nam), G. Kolmey (German Democratic Republic), Yui Huang-Yuan (Chinese People's Republic), Li Men So (Korean People's Democratic Republic), N. Zhagvaral (Mongolian People's Republic), B. Mintz (Polish People's Republic), N. N. Constantinescu (Rumanian People's Republic), A. Alexeyev, L. Gatovsky, A. Kozik, V. Kuvarin, A. Loshchakov and K. Ostrovityanov (Soviet Union), V. Keigl, K. Swoboda and L. Spierk (Czechoslovakian Republic).

The collection opens with an article by K. Ostrovityanov entitled "The Importance of the Victory of Socialism and of Communist Construction in the USSR for the Formation and Development of the World Socialist System." It points out the influence of the successes of socialist construction in the USSR on the development of the revolutionary movement of the international proletariat, the world-historical role of the Soviet Union in the destruction of Hitlerite Germany and militaristic Japan, which led to a sharp weakening of the international imperialist front and created favorable conditions in a series of European and Asian countries for the accession to power of democratic forces led by the working class and the Communist parties. The fundamental shift, after the second world war, in the balance of world power in favor of socialism and the thorough support lent by the mighty Soviet Union to the people's-democratic order have enabled the working class of the European people's democracies, while the socialist revolution was being implemented, to avoid civil war and the concomitant destruction of the productive forces. These countries were able quickly to repair the damage inflicted on them during the war, and to move on to the solution of problems involved in the socialist transformation of society. The triumph of the USSR over the imperialist forces in the second world war contributed tremendously to the victorious development of the Chinese revolution.

L. Gatovsky's article deals with the problem of local peculiarities, and of common regularities dictated by the laws of history, encountered in the building of socialism in different countries. This problem is also dealt with in other articles in the collection. The establishment of the dictatorship of the proletariat as the people's democratic regime was a vital prerequisite to the erection of the socialist economy in the people's democracies. The solution of problems arising in the work of socialist transformation is facilitated to a considerable degree by the availability of the historical experience of the Soviet Union, which has marked out the high road to socialism. It has been through the study and creative application of this experience by the Communist and workers' parties of the people's democracies, with due regard for the concrete-historical situation in each country, that the socialist forms of economy have grown so rapidly in the people's democracies.

The chief regularities, in conformity with historical laws of the socialist revolution and of socialist construction, soundly based on the classics of Marxism-Leninism and historically verified and confirmed by the experience of the Soviet Union and the people's democracies, are formulated in the declaration of the conference of representatives of the Communist and workers' parties of the Socialist countries (November, 1957) in the following manner: the leadership of the laboring masses by the working class, whose nucleus is the Marxist-Leninist party, in the conduct of the proletarian revolution in one form or another and the establishment of the dictatorship of the proletariat in one form or another; the alliance of the working class with the broad masses of the peasantry and other worker strata; the liquidation of capitalist ownership and the institution of public ownership of the basic means of production; the gradual socialist transformation of agriculture; the planned development of the national economy, aimed at the building of socialism and communism, and at raising the standard of living of the workers; the carrying through of the socialist revolution in ideology and culture and the

creation of a numerous intelligentsia devoted to the working class, the laboring masses and the cause of socialism; the liquidation of the oppression of nationalities and the establishment of equal rights and brotherly friendship among peoples; the defense of the gains achieved by socialism from inroads by domestic and foreign enemies; the solidarity of the working class of each country with the working class of the other countries — proletarian internationalism.

The countries that have set out upon the road of socialist construction are characterized by varying states of economic development, a great variety of historically accumulated national peculiarities and traditions, and specific economic, political and cultural conditions. Hence the necessity creatively to apply the general tenets of Marxism-Leninism regarding ways of building a socialist economy, "which excludes the mechanical imitation of concrete forms of economic policy being carried out in other countries" (p. 39). The interests of socialist construction require the bold application of the theory of scientific communism to the concrete conditions of each individual country at different stages of its development. "All nations will come to socialism," Lenin wrote, "this is inevitable, but they will not reach it in quite the same way; but each will add something original and different to one form of democracy or another, to this or that form of the dictatorship of the proletariat, at one rate or another of socialist transformation of the several aspects of social life."[1]

Life has fully confirmed the truth of this prediction of V. I. Lenin's. The materials contained in the collection under review point out how the universal laws of history are manifested under the concrete historical conditions of the individual socialist states. The creative application of Marxist-Leninist teachings to the concrete historical conditions of a particular country may be exemplified by the peaceful transformation of capitalist industry and trade worked out and executed by the Chinese Communist Party. These problems are treated in detail in the article by comrade Yui Huang-Yuan. The author points out the distinctive application of forms of state capitalism and the repurchase policy as transitional forms towards the socialist transformation of the capitalist industry and commerce of China.

The social-economic nature of state capitalism and its role in the transitional period have been exhaustively explored and explained by V. I. Lenin. The repurchase method employed in China to nationalize the means of production, which were in the hands of the capitalists, was worked out in accordance with Leninist principles and developed in accordance with Chinese conditions. Comrade Yui Huang-Yuan adduces a quantity of factual material to show how, as the importance of the state-capitalistic forms of economy grew, the private capitalist sector ceased in consequence to be an independent factor in the economy. The policy of the peaceful transformation of private capitalist industry, combined with the mass movement for cooperativization of production on the countryside, yielded remarkable results. "In 1956," the article states, "the task of the socialist revolution was completed, concluding with the liquidation of the capitalist relations of production, which had been hampering the development of the productive powers of the society. And thereby the problem of 'who will win' on the economic front was solved." (p. 182).

In the course of the socialist revolutions in the various people's democracies, the communist parties evolved various ways of exercising leadership in the political, economic and ideological fields. The one-party system prevails in Albania, Hungary and Mongolia, as well as in the USSR. Popular fronts of democratic parties took shape in the other socialist countries under the leadership of the party of the working class. The experience accumulated by the Communist parties in the leadership of socialist reconstruction with the cooperation of other democratic parties represents a substantial contribution to the theory and practice of the socialist revolution.

The articles of the collection emphasize that the heterogeneous specific ways and methods of building socialist economies in the several countries of world socialism are uniformly governed by the same historical laws of the socialist transformation of society, which are applicable to all countries. The experience of history teaches that the ignoring of national peculiarities leads to loss of contact with life, with the masses, and harms the cause of socialist construction. It is also very dangerous to exaggerate the importance of national peculiarities and to use them as an excuse for departures from the basic principles of socialist construction. Attempts to oppose national peculiarities to the universal laws of the socialist transformation of society, the rejection of the historical significance of the experience of the Soviet Union and all the other countries of the socialist camp, the preaching of "national communism" — such are the highly refined and subtle methods applied today by the imperialist bourgeoisie and their secret agents in the workers' and communist movement in their struggle against the Marxist-Leninist ideology.

The book under review devotes considerable space to the unmasking of the lying, deceitful revisionist ideas on the laws governing the transition from capitalism to socialism. The general and principal laws of socialist construction, L. Gatovsky emphasizes, are determined by the presence in each country during the transition to socialism of the very same economic structures and classes. From this it follows that "the policy of the working class, its attitude towards the other classes, towards the peasantry and all working people on the one hand, and towards the bourgeoisie on the other, is, in its salient and fundamental aspects, the same for all countries that are moving towards socialism" (p. 38). The rejection of the general laws of socialist construction, which have found their fullest expression in the USSR, the first country in which socialism was victorious, constitutes, in practice, a political betrayal of the interests of the working class and a defection to the side of the bourgeoisie.

L. Gatovsky's article thoroughly criticizes the assertions of the revisionists regarding the functions of the socialist state and the centralized planning administration, ways of rural development during the period of transition, the economic role of the bourgeois state in view of the present-day growth of the state-monopolistic economy, and others. The writer traces the connection between "recent" revisionist ideas and the right-revisionist and bourgeois-apologetic economic theories. The article shows that the ideology of modern revisionism involves a repudiation of the creation and development of socialist economic conformations.

Modern revisionism puts forward the thesis that the socialist economy is generated spontaneously, that centralized planning must be rejected and socialist methods of economic administration replaced by the automatic performance of the spontaneously operating laws of the market. When preaching these views, which have gained a certain measure of currency among certain economists in Hungary, the German Democratic Republic and Poland, the revisionists cite failings which cropped up in a variety of cases when economic administration was excessively centralized.

The collection unmasks the counter-revolutionary,

anti-socialistic nature of such theories, whose realization in practice would lead to a weakening of the planned economy and a disorganization of the economic life of socialist countries. The rejection of unified national economic planning, the unleashing of the elemental forces of the market "would inevitably lead to the increasingly widespread application of private enterprise methods in management, and would undermine the foundations of socialism, of socialist ownership" (p. 72).

The socialist countires are incessantly improving the forms of economic management, are expanding the operational autonomy of enterprises and local agencies, perfecting the utilization of cost-price levers in economic planning, and nurturing the growing participation of the working masses in production planning and management. Gatovsky stresses, however, that "the perfecting of planned management, based on the correct combination of centralized planning with the growing creative activity of the working masses, should be clearly distinguished from tendencies in repudiation or to the detriment of centralized planning. The first conforms to historical law; the second is a revision of one of the principles of socialist construction" (p. 72).

The materials in the book under review reflect the practice of socialist construction in the USSR and the countries of the socialist camp; this practice clearly attests to the triumph of the Marxist-Leninist teachings on the period of transition from capitalism to socialism. The conference and resolutions of the Communist and workers' parties' representatives in Moscow have given proof of the tighter solidarity of the socialist camp and the entire international communist movement on the ideological basis of Marxism-Leninism. The faithful adherence of the Communist and workers' parties to the principles formulated in the Declaration of the December Conference is a pledge of the successful completion of socialist construction in the people's democracies.

The experience of the people's democracies contributes much that is new to the solution of concrete problems of socialist industrialization, and to the realization of the Leninist ideas for the socialist reconstruction of the petty peasant economy.

Socialist industrialization is a basic link in socialist construction and an indispensable condition for the elimination of the multi-class structure of the economy during the transitional period. The writers in the collection stress the importance of the preponderant production of the means of production as a critical link in the industrialization of the people's democracies. However, as the world socialist system stands today and what with the presence of the industrially highly developed Soviet Union, there is no need to develop all branches of heavy industry in every single country of socialism (with the exception of the Chinese Peoples Republic). Relying on an emerging international socialist division of labor, the different people's democracies are developing those branches of industry, above all heavy industry, to the creation and expansion of which their natural resources and economic situation are most favorable, and the development of which is advisable from the standpoint of the growth of production throughout the socialist camp.

In the summary report of the CC of the Bulgarian CP to the VIIth Congress of the BCP, Comrade Zhivkov emphasized: "In the determination and execution of the program for the industrialization of the country, we departed from the premise that the Bulgarian Peoples' Republic is an indivisible part of the unified world socialist economic system, that the development of our industry is intimately bound up with the economy of the socialist camp and above all with the economy of the Soviet Union. This has unquestionably facilitated the process of our industrialization. We were not obliged to develop all branches of heavy industry, nor did we have to force the pace of industrialization."[2] This position of Comrade Zhivkov's is fully applicable to the other people's democracies as well.

As a result of socialist industrialization and the furnishing of industry with modern techniques, the pre-war level of industrial production was surpassed in the people's democracies in 1958: in Poland by more than 5.5 times; in Czechoslovakia by 3.3 times; in the GDR by more than 2.5 times in Hungary by more than 4 times; in Rumania by almost 4 times; in Bulgaria by roughly 9 times; and in Albania by 18 times. The level of industrial production in the Chinese Peoples' Republic rose roughly ten-fold between 1950 and 1958. The Korean Peoples' Democratic Republic increased its industrial production to 3.5 times the 1949 level. Industrial production is also advancing at an accelerated pace in the Mongolian Peoples' Republic and in the Democratic Republic of Viet-Nam. In 1958 the over-all volume of industrial production in the countries of the socialist camp was 5 times greater than the pre-war level, while in the capitalist countries it was less than twice as large.

The materials in the collection vividly illustrate the Leninist premise that, with the support of the advanced socialist countries, certain formerly backward countries may effect the transition to socialism, by-passing the protracted and agonizing process of capitalist development. Thus, the article by Comrade Zhagvaral shows that the Mongolian Peoples' Republic, by-passing the capitalist stage, has long since been following the socialist road and has achieved great results in economic and cultural construction.

The distinctive features of the socialist transformation of agriculture in China, Bulgaria, Czechoslovakia and Mongolia are analyzed in detail in the articles by comrades Yui Huang-Yuan, Chernokolev, Swoboda and Spierk, Zhagvaral and others. The revolutionary solution of the agrarian question in the interests of the most rapid possible advances of agriculture and improvement of the welfare of the workers was one of the most important tasks of the people's governments in all the people's democracies. The successful completion of democratic agrarian reforms and the liquidation of feudal survivals paved the way for the transformation of agrarian relations on the countryside based on socialist principles.

The articles in the collection emphasize that the socialist transformation of agriculture was a historical necessity, determined by the entire course of political and economic development after the accession of the people's democratic governments. Guided by the basic principles of Lenin's cooperative plan, the Communist and workers' parties of the people's democracies have achieved outstanding successes in the socialist reconstruction of agriculture. The cooperativization of rural production has been, on the whole, completed. Considerable success has also marked the cooperativization of the peasant economies of other countries. In Czechoslovakia and Albania, about 75 percent of all arable land is being worked by the socialist sector, 60 per cent in Rumania and about 45 per cent in the GDR. Farm cooperativization is also marking ever increasing gains in other socialist countries. The process of socialist transformation of the countryside is proceeding in the various people's democracies under conditions distinctively peculiar to each of these countries. Whereas, in Russia, the historically evolved peculiarities of peasant land ownership generated the necessity for nationalizing the land from the very outset of the revolution, in the people's democracies the socialist transformation of the countryside is being carried

ut while retaining private land ownership.

The retention of private land ownership has engendered riginal forms and methods of cooperativization. In Bulaaria, Albania, the Korean Peoples' Democratic Republic nd Mongolia, one single type of agricultural production coperative has arisen for each of these countries, whereas n others there are several types of cooperatives, distinuished from each other by the degree of their economic ctivity collectivized and by the forms in which their inomes are distributed. The writers included in the book nder review note that, as a result of limited private land wnership, part of the income intended for personal use is istributed in accordance with work done (the basic princile of cooperative income distribution) and part on the bais of land owned or contributed to the cooperative. This eature, however, does not diminish the importance of prouction cooperatives as the socialist form of enterprise on ne countryside. Comrade Chernokolev rightly notes that rent, as it exists within the framework of the TKZKh's Bulgarian agricultural workers' cooperatives), cannot be dentified with absolute capitalist rent. This is a new ecoomic category, which is not engendered by exploitative elations, and hence does not affect the socialist character f production cooperatives" (p. 406). The development of roduction cooperatives in the people's democracies shows nat the growth of collectivized farming leads to a systeatic reduction in the importance of rent as a component f the incomes of cooperative members and to an increase the number of cooperatives (in Bulgaria, for example) hose members voluntarily waive the distribution of inome on the basis of land; the socialist principle of distriution according to work done is here becoming uniformly revalent.

The rapid growth of socialist economic conformations as been due to the industrialization and cooperativization peasant production in the people's democracies. The soialist sector almost uniformly prevails in the industry and ommerce of all the people's democracies; its relative imortance is also increasing in agriculture. The contribuon of the socialist sector to the economies of the people's emocracies may be expressed by its share in the creation the national income: in Poland — about 69 per cent in 958; in Czechoslovakia — 89 per cent in 1956; in the GDR 74 per cent (of the total national product); in the KPDR 93.5 per cent in 1956, etc.

The triumph of the socialist mode of production in sevral European and Asian countries and the emergence on is basis of a world system of socialist economy constites an event of world-historical importance. The rise d consolidation of the socialist world system does not erely imply the spatial extension of the sphere of operaon of the economic laws of the socialist mode of producon; the point is that the advantages of the socialist ecomic system offer the greatest promise for the acceleraon of socialist construction processes in individual counies, for stepping up the pace of the economic deveopment each country and, in sum, the collaboration of the soalist countries as a whole. The relations among the untries of the socialist world system, which reflect the nformity of the socialist mode of production to the laws history, constitute a qualitatively new phenomenon in rld history.

The development of modern forces of production foster a ndency of economic rapprochement among nations; under pitalism, however, this tendency is embodied in abnormal d antagonistic forms. It is a law of nature that the develment of the capitalist world system leads to the enslaveent of some states by others, to the exploitation of backward countries by more highly developed ones and to an inhibition of the development of the forces of production in colonial and dependent countries. Only socialism, by liquidating all forms of social and national oppression, creates conditions for genuine cooperation to benefit all the countries of the socialist camp, for the complete division of labor and cooperativization of production based on the rational utilization of the economic capacities, manpower and natural resources and historically evolved productive skills of the population of each country. The international relations of socialist countries are based on the principles of proletarian internationalism and are characterized by intimate collaboration and mutual assistance in all economic and cultural areas, in politics, and also in the organization of their common defense. The monolithic character of the socialist camp is caused by the universality of the socio-economic basis on which the countries united in this camp are founded, and by their community of objectives in the struggle for socialism and communism. Their solidarity is firmly based on the Leninist principle of equality among nations. The socialist camp is a voluntary union of equal and sovereign states.

The presence of the world socialist camp, headed by the Soviet Union — the mighty land of triumphant socialism, provides more favorable conditions for the socialist transformation of each people's democracy. In their planned construction of the material and productive base of socialism and in the creation and development of their socialist economic conformations, the people's democracies rely on the altruistic and brotherly assistance of the Soviet Union.

The economic and technical aid of the Soviet Union is also a considerable contributing factor to the successes achieved in the cooperativization of peasant production in the people's democracies. The peasantry of the European socialist countries, united in cooperatives, have received modern farm machinery and enjoy the services of Soviet specialists. It is due to this that abundant harvests were gathered already during the first years of the existence of the production cooperatives. The role of Soviet technical aid in the cooperativization of the agriculture of Bulgaria and other people's democracies is pointed out in several articles, including Comrade Chernokolev's.

With the formation of the socialist world system, the economic laws of socialism — the basic economic law, the law of proportional development according to plan, the law of the undeviatingly rising productivity of social labor — operate as the laws of the socialist world system as a whole.

The operation on the scale of the world socialist system of the law of proportional national economic development according to plan makes the planned coordination of the economic development of each socialist country both possible and necessary. Now that an adequately broad industrial base has been laid in each people's democracy for its rational specialization within the world socialist system, the problem of this specialization has become particularly pressing. The development and intensification of international labor division based on the specialization of the countries of the socialist camp, in combination with the over-all development of the economy of each country, to the extent of its potentialities, will ensure a heightened efficiency of production and a rise in the productivity of social labor throughout the socialist world economy, thereby furthering the acceleration of economic and cultural construction and the improved welfare of the people of each of the countries cooperating under socialism.

Problems encountered in the development of a rational system for the division of labor and of economic ties

among socialist states are elucidated in detail in the collection under review, and particularly in articles by V. Keigl, A. Kozik, G. Kolmey and A. Loshchakov. As the writers in the collection rightly emphasize, the international socialist division of labor is based on a maximum merging of the national economic goals of the various countries with the aim of consolidating the economic power of the socialist camp as a whole.

The articles by G. Kolmey and V. Keigl describe the positions of the GDR and Czechoslovakia — two highly developed industrial countries — within the system of international socialist division of labor. The economic function of individual countries within a system of international division of labor is dependent on a series of factors. They include the general level of industrial development, the productivity of social labor in the various branches of the economy, the availability to the country of utilizable ores and power resources, the production traditions and the composition of the skilled worker and technician cadres, the domestic market capacity, the standard of transportation facilities, the geographical situation of the country, etc. The utilization of the productive capacities of individual countries is aimed at an economy of social labor throughout the world socialist system and at bringing the less developed countries up to the level of the more advanced.

The collection shows how the USSR, the GDR and Czechoslovakia have contributed to the industrialization of economically backward socialist countries, mainly of China. The Soviet Union is supplying its brother socialist countries with equipment and materials for the construction of more than 500 industrial enterprises and for other purposes. With the help of the USSR, more than 200 enterprises have either been completed or are under construction in the Chinese Peoples' Republic, 70 in Poland, 57 in Rumania, 39 in Bulgaria, 54 in Albania, 16 in the Democratic Republic of Viet-Nam, 23 in the Korean Peoples' Democratic Republic, 8 in Czechoslovakia, and so forth. More than 2.2 billion rubles' worth of machinery and equipment was exported in 1957 from the USSR to socialist countries. The people's democracies, for their part, are helping the Soviet Union, supplying it with equipment for industrial units under construction. Thus, by 1960, Poland will have supplied the USSR with complete equipment for 4 sugar mills and 10 porous concrete factories; the GDR will have supplied the complete equipment for 7 cement factories and 23 sugar mills, as well as mobile electric power stations, etc.

Economic cooperation among the people's democracies is systematically expanding. Czechoslovakia is providing other socialist countries with complete equipment for electric power stations and for chemical and cement plants now abuilding; the GDR is delivering complete equipment for electric power stations, rolling mills, chemical and cement factories; Poland is supplying complete equipment for sulfuric acid, cement and sugar mills, etc. The socialist countries are arranging for the joint construction of several important units. Thus, with the participation of the GDR, Czechoslovakia and Poland, a combinat is being erected in Rumania to produce cellulose from cane; Poland, the GDR and Czechoslovakia have concluded an agreement on the utilization to their common advantage of the Polish brown coal reserves; through the pooled efforts of the Soviet Union, China and Mongolia, a railroad has been constructed to link these three countries, etc.

The present stage in the evolution of international division of labor is notable for a transition that has taken place to extensive inter-state specialization and cooperativization of production through comradely coordination of planned goals in related branches of the economies of countries within the socialist system. The seven-year plan for the development of the national economy of the USSR opens up new and truly remarkable prospects for developing economic and scientific-technical cooperation among socialist states. The coordination of production schedules in interrelated branches is laying a firm basis for the development of economic exchange, and promotes the further tightening of economic and political ties among the socialist countries.

The collection introduces examples of how correctly organized production cooperativization and specialization within the socialist camp are affording substantial economies in materials and increasing the productivity of social labor and are making it possible to put natural resources and economic capacities to more purposeful use so as to step up the pace of expanded socialist reproduction.

The book goes thoroughly into the organization and forms of scientific-technical cooperation among socialist states, and especially in such branches of science and technology as the peaceful uses of atomic energy, the chemistry of artificial and synthetic materials, etc. Scientific-technical mutual assistance is rendered free of charge: the only charges are for expenses involved in the preparation of copies of written material transmitted.

The development of international socialist division of labor is accompanied by an increase in commodity circulation and a strengthening of the world socialist market. This market is stable; it is not subject to business fluctuations and knows no transaction difficulties, trade barriers or limitations. Its capacity is growing steadily under the influence of the planned specialization and cooperativization of production in the socialist countries. Over-all foreign trading among these countries increased by 1957 to 2.6 times the 1950 level.

The materials of the XXIst Congress of the CPSU contain a profound analysis of a unique quality in the conformity of the development of the world socialist system to the laws of history. The law of proportional development according to plan, operating in the world socialist system, enables countries that once were backward, relying on the experience of other socialist countries, on cooperation and mutual assistance, rapidly to advance economically and culturally. In this manner, the over-all line of cultural and economic development of all the socialist countries is evened out. As the world system of socialism continues to grow and thrive, all socialist countries will develop with increasing success. The prerequisite conditions will be created in them at even greater speeds for the transition from the first phase of communism to its second phase. Comrade N. S. Khrushchev advanced the proposition at the XXIst Congress of the CPSU that the countries of socialism, successfully utilizing the potentialities harnessed by socialism, will effect their transitions to the higher phase of communist society at more or less the same time.

In the competition of the two world systems, the socialist economic system has achieved outstanding gains in a relatively short time. The share of the countries of socialism in the world production of industrial goods is growing from year to year. Whereas these countries are at present producing about one third of all industrial goods being produced all over the terrestrial globe, by 1965, as calculations have proved, they will be responsible for more than one half of the world's industrial production. This will ensure the absolute superiority of the socialist world system over the capitalist system in the decisive sphere of human activity — material production.

The goal of the further intensification of international division of labor and of the perfecting of forms of

economic cooperation among socialist nations demands the working out of a series of looming economic problems. Questions arising in connection with price-formation on the socialist market come into special prominence. Economists are faced with the task of elaborating a methodology for comparing the economic effectiveness of the production of individual types of products in the various countries of the socialist camp, a methodology for determining the level of productivity of social labor, the costs of production and the effectiveness of capital investments in the basic branches of industrial and agricultural production in these countries. Once these problems are solved, it will be possible to clarify the criteria for the rational production specialization of these countries.

The unified efforts of scientific and engineering workers in all socialist countries will be needed to solve the complex economic problems of the socialist world system. The labor that went into the collective work The Socialist World Economic System bears witness to the increasing extent of scientific collaboration among economists of the countries of the socialist camp. The further development of this fertile collaboration is a pledge for the successful solution of the urgent economic problems of the socialist world system.

L. Lvov:

A Book on the National Income of the USSR

D. ALLAKHVERDYAN, The National Income of the USSR, Gospolitizdat, 1958, 152 pp.

The book under review, published as an aid to students of political economy, is devoted to one of the important problems of economic theory — the production, distribution and utilization of national income in a socialist society.

The book consists of an introduction and five chapters. In the introduction, the author notes the principles underlying the study and elucidation of national income problems. It is known that bourgeois economists sever the problem of national income from the theory of reproduction and view them as two distinct and autonomous problems. This leads them to anti-scientific, apologistic conclusions, and especially to the conclusion, widely disseminated in the bourgeois literature, that each income receiver, including the capitalist, the landowner, the investor, etc., is at the same time the creator of that income.

It should be said that, up to a short time ago, the elucidation of our textbook literature of problems of national income was set somewhat apart from the examination of problems of reproduction as a whole, which to some extent hampered students in their mastery of the material.

At the very beginning of his book, Allakhverdyan states that the nature of national income and the conditions under which it arises, is distributed and utilized, can be understood correctly only on the basis of the Marxist-Leninist theory of reproduction. And the author evolves his material in accordance with this uniquely scientific methodological principle. Analyzing the nature of national income in the first chapter, he examines its flow at every point. The concluding chapter, devoted to the national income balance, gives a general, summarizing description of the process of national income reproduction in the USSR. Such an arrangement, on the whole, is to be regarded as successful, and this favorably distinguishes the book from the work by this author on the same subject published in 1952.

Aside from improving the structure of the book, Allakhverdyan has eliminated many other defects of the first edition. The questions dealt with in the book are expanded in scope and the theoretical and practical significance of the problems examined is more clearly shown.

However, the new book, too, is not without several, in our view, fundamental defects.

In the first chapter, the author commits an inaccuracy in his treatment of two subdivisions of the social product. He writes of the necessity of "dividing the material goods produced into two subdivisions, according to their natural form and to the part they play in the process of social production" (p. 10). The two criteria proposed by the author for the division of the social product do not ensure the uniformity necessary in the relation of the fruits of labor to one or the other subdivision. The second of the two criteria proposed is correct — the intended use of the material goods and, if what is involved is a period in the past, the actual use to which they were put. But the natural form of material goods cannot of itself be used as a criterion for relating them to either subdivision I or II. The acceptance of natural form as such a criterion leads the author to assert that war production is to be related to subdivisions both I and II. Such an opinion is mistaken. It is, to be sure, debatable, as Comrade Allakhverdyan notes, whether or not to segregate war production under a separate subdivision, but it obviously cannot be related to the means of production, because war material does not come back into the production process either as an instrument or as an object of labor. It must be said that the author himself, later on in the book, correctly states that war production "irretrievably goes out of circulation in society, does not enter the economic flow, has no purpose to fulfill in production..." (p. 129).

A correct understanding of the nature and sources of national income constitutes the basis for the scientific methodology of his calculations. The author uses several examples to show the fallaciousness of the methods employed by bourgeois economists and statisticians to compute national income. He mentions the unscientific, apologistic nature of the so-called "personal" or "distributive" method by which the magnitude of national income is determined separated from the analysis of the process of social reproduction. Allakhverdyan critically analyzes the methods for computing national income recommended by the authors of a report to the 11th session of the UN Economic Commission. The book demonstrates the total bankruptcy of attempts undertaken recently in the USA to compute housekeeping expenses so as to include them in the national income. These labor expenditures are determined... by the distance covered by the housekeeper per day in going from one room to another. If such a method were admitted, as Comrade Allakhverdyan correctly notes, it may then be concluded that pedestrians, especially people who like to take long walks, create national income.

When examining problems of national income computation in a socialist society, the author deviates in several cases from his own correctly stated methodological principles. Thus, he relates all trade to the branches of material production, which contradicts the premise laid down by himself in the second chapter that, under socialism, part of the labor of trade workers is connected with the realization of the cost of commodities and does not create national income. The gross product of trade is defined in practice by us as the difference between the price at which the trade organization realizes commodities and the price at which it obtains these commodities. This reckoning is based on the fact that, in Soviet trade, net turnover costs comprise a

relatively small proportion of the over-all mass of vital and materialized labor expended in the area of distribution. But, when theoretically elucidating the computation of trade income, attention should be given to the circumstance indicated above.

The contribution of repair work to the creation of national income is incorrectly described in the book. Page 21 says: "Repair work, carried out at the enterprises themselves by their own efforts, are part of the costs of production and are not reflected in the national income figure. Routine repair costs only affect the relationship between individual branches of the national economy in the national income." Basing himself on a purely formal indication (the place where the repair is performed) and on prevalent computing practices, the author commits a theoretical inaccuracy. It is known that labor, expended in repair work (regardless of whether it is routine or capital), participates in material production; it is productive labor and, consequently, creates new value and increases the national income. There is, therefore, no basis for the assertion that repair work performed on the enterprise level is not reflected in the volume of national income.

Nor can the identification, made in this chapter, of the concept of the "physical volume" of the national income with the author's term "natural volume" (page 27) be admitted either. The physical volume of the national income is not the sum of all its component material goods in their natural expression, because such a sum would be impossible to determine. The nature of the physical volume index consists in that the actually productive labor incorporated in the national income is compared to the productivity of labor of a base period. In this manner, the dynamics of the physical national income volume show by how much labor inputs would have to be increased during a current period in comparison with a base period (at the labor productivity of the base period) to achieve a product output comprising the material content of the national income for the current period. The author unfortunately presents a deficient exposition of the nature and significance of the index of physical national income volume.

The second chapter examines problems involved in the production of national income and the factors contributing to its growth. When describing the various branches of the national economy in respect of their contribution to the creation of national income, the author dwells on a series of insufficiently clarified, debatable premises, and in particular, on the role of passenger transport in the generation of national income. As is known, Soviet economists differ on whether passenger transport should be related to the productive or the non-productive sphere. Some feel that passenger transport is a branch of material production, others are of the view that it is a branch of the non-productive sphere, while yet a third group thinks that, if passenger transport is for production purposes, then it participates in material production, but if it is for private, everyday purposes, then it does not participate in production.

Allakhverdyan presents what are, in our view, interesting arguments on behalf of the thesis that passenger transport should not be related to the sphere of material production, that no productive service is rendered in conveying people from one place to another, that what is performed is an everyday service to the population, which does not contribute to production. As it seems to us, the author's arguments contribute to a more correct solution of the problem of the delimitation of the material production and non-productive spheres.

At the end of the second chapter the author examines the link between national income and national wealth. While he correctly enumerates the basic elements of the national wealth of the country, Allakhverdyan nevertheless inaccurately defines the concept itself. He writes: "... National wealth reflects the aggregate mass of available material means incorporating the cumulative labor of all preceding generations" (page 64). If this definition is adhered to, then land, forests, water, etc., for example, cannot be regarded as part of national wealth, since they do not embody human effort. It seems to us that national wealth is not limited merely to accumulated fruits of labor. It should also include natural wealth, previously and currently being drawn into the production process.

The third chapter of the book is devoted to an analysis of the process of distribution of national income in the USSR. The author examines two stages in this process: initial distribution and re-distribution of national income as encountered in the state and in the cooperative-kolkhoz sectors of production. While explaining the process of national income distribution on kolkhozes, he emphasizes the progressively enhancing function of value forms in the distribution of income among kolkhozniks, especially of monthly advances, the establishment of monetary values for work done, etc.

Factual material is adduced to illustrate the role of finances and, in particular of the basic link in the financial system — the state budget — in the planned distribution and re-distribution of national income. Allakhverdyan correctly stresses the point that, given commodity production and the operation of the law of value, national income distribution and re-distribution are organically bound up with the utilization of finances.

The author also thoroughly explains the effect of prices on distribution of national income in the USSR. In this connection he dwells on the problem of bringing the prices of the means of production into closer alignment with their value. While showing the national economic importance of this alignment, Allakhverdyan is correctly critical of those economists who suggest that wholesale prices be revised once and for all, bringing them into full accord with value. "... The adjustment of wholesale prices, their closer alignment with value," the author writes, "must be achieved not by raising them, but by further cutting down on production costs" (page 108).

When speaking of price composition, the author, after the fashion of certain other economists, identifies the value of the surplus product included in price with accumulation (page 104). In our view, such an identification is incorrect. The surplus product not only provides for accumulation, i.e., for the expansion of production, but also generates funds for the maintenance of the non-productive sphere (education, health services, care of invalids and the disabled, etc.).

In the fourth chapter, which deals with the utilization of national income, Allakhverdyan shows how the processes of distribution and re-distribution generate the funds required for production expansion and for the satisfaction of the growing material and cultural needs of the population. The author correctly notes that, if there is to be an expansion of reproduction throughout the national economy, there must be a flow of exchanges, not only between the two subdivisions, but also within each of the two subdivisions I and II of social production. However, the book does not lay bare the distinctive feature of the exchange flow within each of the subdivisions. Moreover, the author states in passing that the flow of exchanges within subdivision II is analogous to the flow within subdivision I. This is far from accurate. As is known, in the exchange process

within subdivision I, some enterprises and branches of production obtain their necessary means of production from other enterprises and branches of production. In subdivision II, on the other hand, no means of production are generated, and exchange here takes other forms.

The author calls the reader's special attention to the problem of securing the necessary unity between the value and natural-material forms of national income in the national economic plan. One fundamental condition for this unity is the correspondence between the solvent demand of the population and commodity supply. Allakhverdyan is justifiably critical of a viewpoint which used to be very widespread and is still encountered in our literature, according to which, under socialism, demand must always outstrip supply. As Allakhverdyan notes, it is also wrong to assert as a law of socialist society that commodity production must outstrip demand. The law of the planned development of the national economy operating under socialism makes possible constant observation of the extent to which solvent demand and commodity supply are in accord with each other.

Discussing problems of the national income balance in the fifth chapter, the author points out certain fundamental defects in prevailing financial planning practices and, in particular, the fact that short-run planning is not combined with long-range financial planning. The book stresses the need for the elaboration of long-range financial plans — of the long-range state budget plan, of balancing monetary incomes and outlays, etc. The author correctly points out that production and financial plans have got to be more closely coordinated at all points in the national economy.

Allakhverdyan raises the interesting question of the elaboration for each republic or economic region of a territorial financial plan which must reflect the aggregate economic relations of the given republic (economic region).

Allakhverdyan's book, in spite of the above noted defects, gives the whole correct account of the process of national income reproduction in the USSR. Most economists will benefit from reading it.

. Shamberg, N. Kurilin, B. Kaye nd K. Potopov:

conomic Literature Released in 1959

1959, the first year of the seven-year plan for the development of the national economy of the USSR, marks a considerable increase in the output of literature on economic problems. That the readers of the journal may be informed new books in preparation for release in 1959, the editors offer a brief review of the economic literature publication plans of three publishing houses: the State Publishing House for Political Literature, the State Publishing House for Socio-Economic Literature and the State Publishing House for Literature on Economic Planning..

STATE PUBLISHING HOUSE FOR POLITICAL LITERATURE (GOSPOLITIZDAT)

The State Publishing House for Political Literature regards as its most important task the publication of books and pamphlets propagandizing the seven-year plan for the development of the national economy of the USSR and the materials of the extraordinary XXIst Party Congress. A pamphlet series is projected on the development of industry, agriculture, transport and construction, on the rise in the material prosperity and cultural level of the Soviet people, on the advances of science and engineering in the current seven-year period. A brochure series is planned on the outlook for the development of the economies and culture of the Union republics between 1959 and 1965. Brochures are also being published under the titles: The Seven-Year Plan and the Rivalry of the Two Systems, A New Stage in the Execution of the Leninist Plan for Building Communism, The Distribution of Material Goods under Socialism and Communism, On Gaining as Much Time as Possible in the Competition with Capitalism, The Seven-Year Plan and International Socialist Division of Labor, and many others.

Altogether, the publishing house has planned for the 1959 release of about 50 books and brochures on economic problems totalling about 650 printed pages.

In 1959 the publishing house is continuing the publication of thematic collections of Lenin's works. A collection will be published under the title V. I. Lenin on Labor Legislation (50 printed pages). The book will be furnished with documentary appendices and annotations.

A collection of speeches by N. S. Khrushchev, For a Rapid Advance in Agriculture (35 printed pages), will be devoted to the current stage in the struggle of the Party to improve agriculture, and will include speeches made between September, 1953 and January, 1959. They searchingly analyze the state of the country's agriculture, reveal untapped areas of possible improvement, and explain measures taken to promote a sharp rise in agricultural production.

Publication of a collection of articles and speeches by M. I. Kalinin, Work on the Countryside (30 printed pages), is planned, which will relate the struggle waged by the Party for the collectivization and reinforcement of the kolkhozes and sovkhozes.

Gospolitizdat continues in 1959 with the publication of textbooks for the Party educational system and institutions of higher learning (VUZes). A popular textbook, Political Economy (20 printed pages), prepared by L. A. Leontyev, will be published. The Economics of Agriculture (25 printed pages), a student aid by M. M. Sokolov, will examine the following subjects: the solution of the agrarian problem in the USSR, the socialist system of agriculture and its superiority over the capitalist system, the technical base of agriculture, labor organization and remuneration, management and planning, accumulation and expanded reproduction in agriculture, the economics of the branches of agriculture, methods for the computation of the production costs of agricultural produce and of labor productivity in agricultural production.

The student aid The Economics of Soviet Trade, prepared by a team of authors (2nd, revised edition, 20 printed pages), will deal with basic questions of Soviet trade as a branch of the national economy, the economics of trade organizations and enterprises. The textbook The Economics, Organization and Planning of the Material-Technical Equipping of the National Economy of the USSR (25 printed pages), prepared by a team of authors, deals with the objectives and organization of material-technical supply in the USSR, with basic ways of economizing on means of production, problems involved in the allocation of industrial reserves, methods of drawing up plans of supply and the organization of work to put them into effect. The book analyzes distribution costs, examines questions of the financing of material-technical supply, and the organization of cost accounting in the supply field.

Much of the planned output will consist of reference

literature. The International Political-Economic Yearbook for 1959 (50 printed pages), prepared by a group of authors at the Institute of World Economics and International Relations of the Academy of Sciences of the USSR, is of particular interest. The work deals with aspects of USSR foreign policy and international relations, the workers' and Communist movement, presents data on the collapse of the colonial system, on the development of the world economy, and also contains rich reference material on the countries of the world, on the most important international, political, economic and social organizations, and statistical indices of the national economies of the socialist and capitalist countries during 1958.

Extensive factual material illustrating the course and outlook for the economic rivalry between the two systems, will be presented by the reference work Socialism and Capitalism in Figures (10 printed pages). It is proposed in this work to present comparative figures on the pre- and post-war periods, including 1958, to illustrate the development of industry, agriculture, transport, trade, culture and the situation of the workers in the countries of socialism and the chief capitalist countries, and also data on the per capita production of salient forms of industrial and agricultural products in various countries.

The Handbook of the Industrial Enterprise Manager (20 printed pages), being prepared by a group of authors, is intended as a manual for the managers and Party-managerial activist personnel of enterprises. The reference work contains technical-economic and legal material, based on Soviet state legislation and the crystallization of advanced practices, relative to the great diversity of enterprise managerial activities (administration, labor organization, setting up production, production processes, output marketing, finances, control, managerial methods, etc.). A large section is devoted to an examination of the system of economic indices of the industrial enterprise, to a presentation of methods for analyzing its economic activities.

The publishing house has also laid plans for the publication of a considerable number of scientific monographs and popularized works.

These include a collection of articles, Problems of the Political Economy of Socialism (25 printed pages) which will include articles on commodity production and distinctive features of labor under socialism, on wages as a socialist economic category, on driving forces and contradictions in the development of the socialist economy, etc.

A collection of articles, Against the Revision of the Marxist-Leninist Political Economy of Socialism (20 printed pages), will be devoted to the struggle against revisionism.

This collection will deal with the class roots of revisionistic and reformistic theories, and of revisionist conceptions of the state, with revisionist distortions of the basic laws that govern the building of a socialist economy, with the distinctive features of commodity production and the operation of the law of value under socialism, the conformity to historical law of socialist reproduction, etc.

A monograph by M. V. Kolganov, National Income (A Historical and Theoretical Outline) (22 printed pages), investigates the development of the theory of national income and its nature under capitalism and socialism. The author examines the methods employed in the USA for the computation of national income and, on the basis of a critical analysis of bourgeois statistical material, presents his own calculations of national income volume in the USA in accordance with the Marxist understanding of this quantity. Kolganov analyzes the factors and dynamics of the growth of national income in the socialist society, changes in the relative importance of each branch of the national economy to its composition, and the planning and computation of national income in the USSR.

A work by L. I. Lyuboshitz, The Relations Among General and Specific Economic Laws (10 printed pages) deals with a problem of political economy on which little work has been done.

A book by I. P. Suslov, Lenin's Methodology of Economic Analysis (20 printed pages), examines the methods applied by Lenin in his works on economics.

A monograph by Sh. Ya. Turetsky, Outline of Planned Price Formation in the USSR (30 printed pages), is devoted to a presentation of the theoretical bases and practices of price formation in the Soviet economy. The author shows the bases of Soviet price policy, describes the existing price system, examines wholesale industrial prices, farm produce prices, retail prices in state and cooperative trade, kolkhoz market prices and transportation tariffs. Turetsky expresses his views on ways to improve price formation practice.

A collection of articles, The Experimental Change-Over of Industrial Enterprises to the 7-6 Hour Day (12 printed pages), draws conclusions from the experimental change-over to a shorter working day and the adjustment of wages at enterprises in the coal (after the example of a Donbass mine), metallurgical, chemical and machinery industries.

A work by S. A. Heinman, Economic Problems in the Organization of Industrial Production (18 printed pages), examines problems involved in the introduction of mass and large-scale serial production methods and the related aims of standardization, unification and normalization of assemblies and components, the organization of rhythmical plant operation, the securing of effective quality control, the organization of auxiliary operations (repairs, tooling, intra-plant transportation) and several others.

A monograph by A. F. Yakovlev, Outline of the Economies of Socialist Countries (22 printed pages), examines the over-all conformity of socialist construction to historical law and specific peculiarities in the development of individual countries, and also problems of international socialist division of labor and economic cooperation.

Several books and brochures will be issued in commemoration of the Tenth Anniversary of the Chinese Peoples' Republic. A joint work of Soviet and Chinese scholars, The Development of the Economy of the Chinese Peoples' Republic During 10 Years (25 printed pages), analyzes the development of the national economy of the CPR during 10 years. The collection contains articles on the development of both individual branches of the economy and of the national economy as a whole. The work of the well-known Chinese economist Shu Ti-Sing, An Analysis of the Economy of the Transitional Period in the CPR (translated from the Chinese, 20 printed pages), examines problems of the economy of the transitional period in the CPR: distinctive features of the industrialization and socialist transformation of agriculture, of the domestic craft industries and of capitalist industry and trade, general and specific forms of socialist construction in peoples' China. A book by Tseng Beng-Tsin on the socialist industrialization of China (20 printed pages). a brochure by V. Ya. Sidekhmonov on socialist construction in China (9 printed pages), and other works, are being prepared for publication.

Brochures by N. D. Kolesov, Socialist Ownership of the Means of Production — The Foundation of the Production Relations of Socialism (6 printed pages), V. E. Komarov, Funds of Social Consumption under Socialism (7 printed pages), and others, are to be published as aids to students of political economy.

The following works are in preparation: a work by A. D. ursky, The Economic Foundations of National Economic lanning in the USSR (20 printed pages), a collection under ie title of The Law of Value and its Application in the Naonal Economy of the USSR (30 printed pages), books by O. . Kozlova, The Rising Cultural-Technical Standards of the orking Class in the USSR (13 printed pages); I. P. Oleinik, ocialist Economic Construction in the Rumanian Peoples' epublic (12 printed pages); P. A. Shein, The Materialechnical Supply of Industrial Enterprises (20 printed ages); by a group of authors, Management and Planning in e Economic Administrative Region (15 printed pages); by A. Kulev, From the Experience of the Sovnarkhozes of oscow, Leningrad, the Donbass and the Urals (15 printed ages), and several other books and brochures.

STATE PUBLISHING HOUSE FOR SOCIO-ECONOMIC LITERATURE (SOTSEKGIZ)

The Sotsekgiz was established in early 1958. Its ecomic literature department has the task of preparing monraphs and scientific popular works on socialist political onomy, the economics of modern capitalism, and the hisry of national economy and of economic teachings. During e past year the publishing house has released a few dozen onographs and scientific popular brochures. The plan of is organization for 1959 provides for the publication of 4 books and brochures totaling about 2,700 printed pages which more than one third will be on economics).

Prominent in the plan are books on the scientific elaboran and propagandization of the problems of Communist nstruction raised by the XXIst Congress of the CPSU. The rk by Academician S. G. Strumilin, On the Way to the ilding of Communism, has already been released. This ok presents the teachings of the classics of Marxisminism on the second phase of communism, discusses the tlook for the achievement of the chief economic aims of USSR, for the further development of the kolkhoz sysn and two forms of socialist ownership. The author anaes in detail the ways to achieve an abundance of material ods and the outlook for the transition to distribution acrding to need.

A collection of articles, The New Stage in the Developnt of the Kolkhoz System (22 printed pages), will deal h Party and government measures to further develop and nforce the kolkhoz system. This work discusses probns involved in the further advancement of agriculture in nnection with changes in practices of production-technical rvices to kolkhozes and the reorganization of the MTSes. ecial attention is given to the outlook for the development kolkhoz-cooperative ownership, the role of indivisible khoz funds in raising the level of social production, obtives of technical progress, the improvement of labor orization and remuneration on kolkhozes, problems inved in the reduction of kolkhoz production costs, the introtion of cost accounting applications to kolkhoz produch, the new system, prices and conditions for state purses of kolkhoz produce, the problem of overhauling the A in the production of basic farm products, and the furr development of democratic centralism in kolkhoz manment.

collection, The Superiority of the Socialist Economic tem (20 printed pages) will be published, now being pred collectively by the faculty of political economy of the demy of Social Sciences attached to the Central Committ of the CPSU.

he question of the superiority of socialism over capital will also be treated by a scientific popular work by N. P. Filimonov, Two Worlds — Two Laws of Development.

The theoretical and practical questions raised by the resolutions of the November (1958) Plenum of the CC CPSU and the XXIst Party Congress, will be propagandized by brochures by G. M. Sorokin, The Seven-Year Plan — A New Stage in the Building of Communism in the USSR; by A. A. Zvorykin, The Creation of the Material-Technical Base of Communism in the USSR; a work by S. P. Pervushin, The Economic Program for Building Communism in the USSR; by R. A. Belousov and O. T. Bogomolov, The Economics of the Soviet Union in the Post-War Period (Results and Prospects); by Yu. P. Konyusha, Technical Progress and the Chief Economic Goal of the USSR; I. A. Changli, The Development of Socialist Competition and New Forms of Communist Labor.

A work by Ya. M. Zhukovsky, Socialist Ownership, examines pressing problems of Marxist-Leninist doctrine on ownership and presents a critique of bourgeois and revisionist theories.

A broad range of problems are analyzed in the collection of articles bearing the title of The Economic Laws of Socialism and their Application.

A work by A. S. Dolskaya, The Socialist Law of Population (10 printed pages), deals with a problem which, though little work has been done in it, is an important aspect of political economy.

A work by I. T. Belyaev, Land Rent under Socialism, examines the conditions under which differential land income is formed and transformed into differential rent, analyzes its sources, explains problems of rent distribution between kolkhozes and the state. The author gives special attention to problems involved in the placing of branches of agricultural production and in their rational combination on individual farms with due regard for rent-generating factors.

A brochure by G. I. Zinchenko, Modern Revisionism in the Field of Political Economy, exposes the Revisionist distortions of Marxist-Leninist economic theory.

A group of authors from the Scientific Research Institute of Labor has prepared for publication a work on Methodological Problems in the Study of the Standard of Living of the Workers. It investigates problems of worker living standards in the USSR and in capitalist countries, methods for computing living standards, problems of income statistics, and universally characteristic changes in consumption generated by rising income levels.

A collective work, The Economic Effectiveness of Capital Investments and New Techniques (35 printed pages), will be published in 1959.

The urgent problem of socialist management is treated in the collection Theory and Practice of Cost Accounting (17 printed pages).

A group of authors under the direction of Academician V. S. Nemchinov has prepared a monograph on Mathematics Applications in Economic Studies. It presents works by scholars of the Soviet Union and the people's democracies on linear programming and the production "expenditure-output" balancing method. The application of mathematics opens up new and broad possibilities for the further perfecting of economic planning calculations in industry, agriculture and transport, and permits the optimal utilization of cash resources and productive reserves.

The Sotsekgiz is also charged with the publication of literature dealing with problems of socialist construction in the people's democraces. Several books will be published during 1959 in this area of subject matter. The work by V. P. Komissarov and A. N. Popov, Monetary and Credit Systems in the People's Democracies, examines fundamental changes that have taken place in the nature and function

of money, the role of credit, banks and finances since the establishment of the people's democratic regimes. The authors give considerable attention to the description of credit and accounting relations among socialist countries.

A book by a group of authors, Problems of the New Planning and Financing System in Czechoslovakian Industry, translated from the Czech, will arouse great interest. It reveals the nature of a new system of industrial management that was instituted in 1958, and its importance for the completion of socialist construction in the Czechoslovak Republic.

Soviet literature had hitherto not given adequate attention to the socialist transformations and the development of the economic structure of the Democratic Republic of Vietnam. This gap is being filled by the publication in Russian translation of North Vietnam on the Road to Socialism, by the well known Vietnamese economist Buy Cong Chyng.

About 40 books and brochures will be released on questions of the economic structure of capitalism and on the history of economic thought and national economy. The most noteworthy of these is the Subject and Name Index to volume I of Marx's Capital (15 printed pages), compiled by A. L. Reuel. This is the first such index to be published. Similar indices for volumes II and III of Capital will be published in subsequent years.

Problems of the theory of imperialism are treated in a monograph by Prof. V. D. Motylev, Finance Capital and its Organizational Structure. In the first part of the work the author examines the aspects and forms of industrial monopolistic amalgamations, the structure of finance capital, the intensification of the exploitation of the proletariat in the age of imperialism, problems of monopolistic prices, the correlation between monopoly and competition, and monopolistic high and average profits. The second part presents a historical analysis of industrial and banking monopoly mergers in the principal countries of imperialism up to the present.

Sotsekgiz is commencing publication of a monograph series on problems of economic crises. The first work in this series is Theory and History of Economic Crises and Cycles, a monograph by L. A. Mendelsohn. Two volumes of this book will be published in 1959. They will present the Marxist-Leninist theory of economic crises, and will investigate the world economic crises of the age of free competition and of the period of transition from free competition to monopoly rule, including the agrarian crisis of the last quarter of the 19th century.

A monograph by A. I. Katz, The Deterioration of the Position of the Proletariat in the USA under Imperialism, investigates the position of the working class in the USA during the last 50 years.

Imperialism and the Deteriorating Health of the Workers, by A. N. Rubakin, will be one of several monographs on the condition of the working masses under capitalism.

Several books will be published by Sotsekgiz on agrarian relations and the condition of the laboring peasantry in capitalist countries. Monographs slated for publication are Agrarian Relations in West European Countries After the Second World War, by A. M. Petrushov, Agrarian Relations in Spain under the Franco Regime, by J. Gomez (a translation of a report to the IIIrd Plenum of the CC of the Spanish CP), and Agrarian Relations in Modern Brazil, by A. M. Sivolobov.

Sotsekgiz will release a work by the well-known Vietnamese Marxist economist Fam T'khang Vihn, The Economic Structure of South Vietnam, which will investigate the basic economic developmental trends of this part of the country. The economic structure of colonial, dependent and backward countries will also be treated in a series of other books and brochures. These include Algeria, a politico-economic essay by N. G. Pospelova, and Outline of the Indonesian Economic Structure, a work by Ya. N. Guzevaty. A small brochure by M. A. Kohl, Plantations in Colonial and Backward Countries, will acquaint the reader with modern plantation management, the condition and struggle of plantation workers, of which there are several millions in the countries of capitalism. A Russian translation will be published of An Investigation into the Economic Conformations of Semi-Feudal and Semi-Colonial China, a monograph by the Chinese scholar Wang Ya-Nang.

One of the important tasks of the publishing house is the publication of critical works on the bourgeois ideology and of works that unmask the reformist and revisionist perversions of Marxism. The publication of a series of such works is planned for the current year. They will include the collective work A Critique of the "Theory" of Regulated Capitalism and the monograph A Critique of the Economic Theories of Right-Wing Socialists (West Germany and Austria), by I. N. Dvorkin.

A Critique of Bourgeois Population Theories and Policies, a book by B. Ya. Smulevich, will also be published.

Along with monographs and popularized scientific works Sotsekgiz will publish reference material. 1959 will witness the publication of The Development of the Economic Structure of the People's Democracies, a yearbook in preparation by the Scientific Business Research Institute of the USSR Ministry of Foreign Trade. The yearbook will examine aspects of the development of the economic structure of the people's democracies in 1958 and the prospects for its further growth.

Among the reference literature to be published in 1959, A Statistical Reference Work on the Economic Geography of Foreign Countries (Socialist and Capitalist Countries), in preparation by M. B. Wolff and V. S. Klupt in 49 printed pages, is of special interest. The reference work will contain materials on the territories, populations, natural wealth, production of important industrial and agricultural products, geographical production, distribution, transport, freight turnover, the foreign and domestic trade of foreign countries. Variation trends are presented for several years. Also slated for publication is a reference work The Economic Structure of Capitalist Countries During 1958, in preparation by the Scientific Business Research Institute of the USSR Ministry of Foreign Trade. 1959 will also witness the publication of a statistical reference work The Agriculture of Capitalist Countries (prepared by the agrarian sector of the Institute of World Economics and International Relations of the Academy of Sciences of the USSR).

The Sotsekgiz plan lays considerable emphasis on subjects relating to national economic history and economic doctrines. The publishing house plans the release of a lecture course on the history of the national economy of the USSR, being prepared by a large group of authors from Moscow, Leningrad, Kiev and other scientific centers throughout the country. State monopolistic capitalism in Russia will be treated in a monograph by A. P. Pogrebinsk. The National Economy of the USSR during the Great Patriotic War, a work by G. I. Shigalin, is also included in the publication plan.

Part 1 of volume II of the History of Russian Economic Thought, by a group of authors at the Economics Institute of the AS USSR, is being prepared for publication. It will discuss the age of pre-monopolistic capitalism. A collection of articles under the title of From the History of the Economic Thought of the Peoples of the USSR, V. I. Lenin's Development of the Marxist Theory of Reproduction

the Struggle Against the Populists and Legal Marxists by M. Mrachkovskaya, and The Economic Views of G. V. lekhanov, a monograph by I. M. Brover, are also being repared for publication.

The publishing house will in 1959 release Finance Capi-l, a work by R. Hilferding, which, although it contains rrors, as is known, made a certain positive contribution to e investigation of recent phases in capitalism. A three-olume selection of the works of N. I. Sieber, the most ominent Russian economist of the 70's and 80's during e 19th century, will be published. The first volume is to clude Sieber's basic work — David Ricardo and Karl arx in their Socio-Economic Investigations. The second olume of the economic writings of V. V. Berv-Flerovsky d a collection of materials on the Economic Platform of e Russian Section of the First International, will be pub-shed.

STATE PUBLISHING HOUSE FOR LITERATURE ON ECONOMIC PLANNING (GOSPLANIZDAT)

The State Publishing House for Literature on Economic anning was organized in late 1957 and, as of early 1958, gan publication of literature on the theory and method-ogy of national economic planning, on the economics and anning of individual branches of production, on planning r the economies of Union republics and economic regions, the economics of the people's democracies and problems volved in the economic competition between the two sys-ms.

In 1959 the publishing house will release scientific works d monographs, scientific popularizations, textbooks, and ference literature on the more important aims of the pres-t stage in the building of Communism, set by the XXIst ngress of the CPSU.

A series of brochures will be published to propagandize decisions of the XXIst Congress of the CPSU. It will in-ude The Fuel and Power Industry of the USSR in the rthcoming Seven-Year Period, The Development of So-et Metallurgy, Machine-Building in the USSR from 1959 to 65, The Outlook for the Development of the Chemical In-stry, Technical Progress in the USSR, The Food and ght Industries of the USSR in the Seven-Year Plan, and ers. These brochures will be written by leading figures planning and managerial agencies and by scholars.

A series of books will be published on the theory and thodology of national economic planning. In the collec-n National Economic Planning in the USSR, a group of authors he State Planning Committee of the USSR Council of Minis-s (Gosplan USSR) and the Scientific Economic Research titute of the Gosplan USSR will explain the theoretical ndations, principles and methodology, and also aspects he organization, of national economic planning in the SR under the new conditions of industrial and construc-n management.

A scientific popularization work by P. S. Ivanov, The De-opment of the National Economy of the USSR during 9-1965, will examine the basic aims and ways of ac-nplishing the chief economic objective of the USSR and raising the material and cultural standard of living of the rkers. The author will explain the content of the quanti-ve and qualitative indices of the seven-year plan for the elopment of the national economy, and will describe duction shifts and relocations and the development of the ional economies of the Union republics.

Utilizing materials of the seven-year plan, The Account-Method of National Economic Planning (8-10 printed es), by A. I. Petrov, describes the salient features and requirements of the law of planned, proportioned national economic development, and examines the national economic balance-sheet, basic materials and financial balance-sheet indices and set-ups, and also the manpower balance sheet.

The Outlook for the Development of Soviet Industry, a work by A. N. Yefimov (8 printed pages), is devoted to an examination of the basic aims and paces of USSR industrial development from 1959 to 1965. The author analyzes the economic, technical and organizational pre-conditions for the further expansion of industrial production.

A collective work, The Materials Balance in the National Economic Plan (25 printed pages), lays bare the methods of working out balances for the more important industrial products: ferrous and non-ferrous metals, lumber and construction materials, equipment, and also discusses the organization and planning of material-technical supply under the new conditions of industrial and construction management.

A book being prepared for publication by I. A. Yevenko, The Methodology of Drafting Plans in USSR Industry and of Verifying their Fulfillment (12 printed pages), examines problems involved in industrial planning and in the economic analysis of plan fulfillment indices.

The plan of Gosplanizdat gives considerable importance to literature on the geographic distribution of productive forces. Thus, a book by Yu. I. Koldomasov (20 printed pages) will be devoted to inter-regional economic ties in the national economy of the USSR. It will give expression to problems involved in the formation of economic complexes in economic regions, their specialization, and the prospects for the development and rationalization of inter-branch, inter-regional and intra-regional economic ties. The collective work The Geographic Distribution of Branches of the National Economy of the USSR (25 printed pages) analyzes the factors and distinctive features of the geographical distribution of branches of industry, agriculture and other branches of production.

During the period of the all-out building of communism, problems of technical progress and the supply of all branches of production with the latest and most highly productive techniques will acquire the greatest importance. Technical progress in the national economy of the USSR is dealt with in a work by L. V. Kuznetsov (10 printed pages). It examines our country's achievements in the creation and widespread introduction of new techniques, reveals the significance of new techniques for raising the productivity of labor and demonstrates the superiority of the socialist economy in the development of science and engineering. The work discusses the basic trends of technical development, and the basic tasks in the area of technical progress in the various branches of the national economy. The author elucidates the practices of planning for technical progress and for the widespread dissemination of new techniques and reveals existing deficiencies, advancing suggestions for their rectification. The book devotes considerable space to the economic effectiveness of implementing new techniques (by means of examples from various branches of the national economy).

One of the most important goals of the seven-year plan is the reconstruction of the fuel balance of the country. This problem will be discussed in The Fuel Balance of the USSR and Methods for Drafting It (10 printed pages), by D. I. Maslakov. The author explains the economic reasons for increasing the role of petroleum and gas in the fuel balance, examines problems of the international division of labor in the socialist camp in respect of the development of the fuel industry, and describes the fuel balances of the chief capitalist countries. A detailed account is given of the

methods of drawing up a composite fuel balance for the USSR and for each of the republics and economic administrative regions.

The publishing house is releasing a series of books on the economics and planning of individual branches of industry, construction and transportation. The collective work The Development of Ferrous Metallurgy in the USSR During 1959-1965 (20 printed pages) discusses the results of the development of ferrous metallurgy and compares the levels and rates of development of this branch of industry in the USSR and in foreign countries. The central part of the work is devoted to a description of the development of ferrous metallurgy between 1959 and 1965. The book analyzes capital investments in metallurgy and the development of its raw materials and fuel supply base, problems of specialization, cooperativization, combination, the geographical distribution of metallurgical enterprises and the technical progress aims of metallurgical production.

The book The Development of the Chemical Industry of the USSR Between 1959 and 1965 (20 printed pages), in preparation by a group of authors, will give a brief historical sketch of the development of the chemical industry, relate successes in the introduction of chemical processes and products in the national economy, will set forth the goals of the chemical industry in the current seven-year period and ways to achieve them, and problems of the expansion of its raw materials and fuel and power supply base, cooperativization, combination, geographical distribution of chemical enterprises, etc.

A work by P. A. Borisov and A. L. Rabkina, The Gas Industry of the USSR and the Prospects for its Development (15 printed pages), describes the expanding role of gas in the fuel and raw materials balances of the country, states the prospects for intensifying the extraction and processing of gas during the current seven-year period. The authors draw generalized conclusions from leading experimentation in the development of the gas industry of the USSR and of foreign countries. Problems involved in the utilization of natural and derivative gasses as chemical raw materials are examined in detail, and technico-economic indices of the production of synthetics from gas raw materials are analyzed.

A work by E. A. Russakovsky and I. S. Vasilkov, Planning for the Development of the Electric Power Industry (15 printed pages), tallies up the results of electrification work carried out in the country over the past years and examines the prospects for developing this work between 1959 and 1965, sets forth the methodology of electric power supply planning and the determination of requirements and ways of satisfying them, and analyzes methods of computing the electric power balance. Problems of industrial economics and planning will also be covered in Planning for the Utilization of Productive Capacities in Industry (12 printed pages) by V. S. Kurotchenko and P. A. Osada; The Automation of Production Processes in USSR Industry (12 printed pages) by V. A. Ruzin; The Effectiveness of Specialization and Cooperativization in the Machinery Industry (10 printed pages) by M. V. Gazalyev and A. G. Lerman; The Technical-Economic Effectiveness of Electric and Thermal Traction Applications in Rail Transportation (20 printed pages) by A. P. Mikheyev, Ya. V. Skukstahl and V. A. Dmitryev; The Non-Ferrous Industry of the USSR and the Outlook for Its Development (15 printed pages) by V. I. Loginov; Methods for Regulating the Consumption of Material Resources in the Machine-Building Industry (15 printed pages) by V. I. Dudorin; The Planning of Labor Productivity, Worker Strength and Wage Funds at Industrial Enterprises (8 printed pages) by G. S. Chubarov; Socialist Labor Organization and Industrial Management in the USSR by M. A. Bishayev and M. M. Fedorovich, Planning at the Industrial Enterprises by D. I. Sankin, and others.

A work by V. A. Chuvikov, Kolkhoz Communal Funds (8 printed pages) analyzes basic qualitative and quantitative changes that have taken place in basic kolkhoz production funds, raises questions dealing with amortization and with the creation of funds for amortization on kolkhozes from the standpoint of the task of introducing cost accounting methods in kolkhoz production. The author describes the sources for the formation and replenishment of indivisible funds and their significance for the reinforcement and development of the communal farming sector [as opposed to the private, subsidiary farming sector. Transl.]

A group of authors at the Scientific Economic Research Institute of Gosplan USSR are preparing a popularization work, Methods of Kolkhoz Labor Productivity Planning (8 printed pages), which examines the system of indices and methods for computing labor productivity, methods for determining the amount of labor expended per product unit in plant growing and livestock raising, individual factors affecting the raising of labor productivity on kolkhozes, the importance of increasing labor productivity for raising the economic level of kolkhoz production.

It is also planned to release the following books on the economics of agriculture in 1959: The Economic Foundations of Farming Systems in Natural-Economic Zones (200 printed pages) by A. I. Tulupnikov; The Planning of the Production of the Basic Farm Products per 100 Hectares of Arable Land and Farm Produce Balances, both books by M. K. Gritskov; Planning for Capital Investments in Farm Enterprises (10 printed pages) by I. G. Mishchenko; On the New Progressive Forms of Wage Payment on Kolkhozes (10 printed pages) by K. A. Okhapkin; Farm Labor Productivity Planning Methods by P. S. Minakov, and others.

The plan of Gosplanizdat gives considerable importance to literature on the economics and economic planning for republics and economic regions of the USSR. In the book The Economic Structure of the Belorussian SSR and the Prospects for its Development (10 printed pages), S. N. Malinin and M. M. Ippa discuss the achievements of Belorussia in economic and cultural construction, delineate the part played by the national economy of the BSSR in the All-Union division of labor, the economic ties of the BSSR with other republics and raions of the USSR and the over-all development and branch composition of the republic's economy. Special attention is devoted to the basic goals of the development of the national economy of the republic between 1959 and 1965.

A work by L. I. Fominy, The Industrial Development of the Kuibyshev Economic Region, briefly sketches the historical development of industry, agriculture and transport and describes the present state of the basic branches of production and the outlook for the development of the region. The author describes what has been done by the sovnarkhoz to improve the utilization of raw materials, to rationalize economic relations and to specialize and cooperativize industrial enterprises.

Problems of industrial planning, capital construction and financing under the new conditions of industrial and construction management are explained through the example of the Rostov economic administrative raion in a book, Industrial Planning in the Economic Raion (10 printed pages), written by a group of authors from the Rostov sovnarkhoz and the Rostov Financial-Economic Institute. The work also states the prospects for the economic development of the raion between 1959 and 1965.

In The Sovnarkhozes and the Mobilization of Production

eserves (10 printed pages), A. I. Vedishchev examines ew possibilities for the discovery and utilization of inter-al production reserves in connection with the broadened rerogatives of Union republics and the revamping of in-ustrial and construction management on a territorial ba-is. The author draws generalized conclusions from the xperience of a series of sovnarkhozes in the improvement f power resources utilization, of local raw material ources, of the rationalization of intra-raion and inter-aion ties and in all-around economic development.

The experience of sovnarkhozes will also be treated in he following brochures: Sovnarkhoz Experience in the Spe-ialization and Cooperativization of Industry, The Sovnar-nozes in the Struggle for the Further Development of In-ustry, The Sovnarkhozes in the Struggle to Improve Con-truction, The Experience of the Technico-Economic Coun-ils of Sovnarkhozes.

A group of authors has prepared a work on Industrial anagement Organization at the Moscow Sovnarkhoz (10 rinted pages). It elucidates questions of production man-gement and planning organization, the planned introduction new techniques and advanced technology, the specializa-on and cooperativization of production in the sovnarkhoz dustries, the experience of inter-raion cooperation organ-ation and the operations of the technico-economic council the sovnarkhoz.

Along with literature on the development of the national conomy of the USSR, Gosplanizdat will also publish books the economics of the people's democracies. In com-emoration of the 10th anniversary of the foundation of the PR, a book is being prepared on The Economic Structure the Chinese Peoples' Republic over 10 Years (1949-1959) 5 printed pages), written by a group of scholar economists the Chinese Peoples' Republic and scientific staff work-s at the Institute of Economics of the AS USSR. It re-ews the achievements of the national economy of China ring the years of the people's government.

A collective work The Socialist Industrialization of the eople's Democracies (25 printed pages), in preparation by embers of the Institute of Economics of the AS USSR intly with economists from the people's democracies, ana-zes the objective necessity, the general conformity to storical law and specific peculiarities of socialist indus-alization in the people's democracies. The authors elu-idate the part played by industrialization in the cooperativ-ation of peasant production, in the development of agri-lture and the expansion of productive forces, and in ising the material welfare and cultural level of the work-s. It also reviews questions of international socialist vision of labor and its significance for accelerating the cialist industrialization of the people's democracies.

A work by A. D. Stupov, The Development of Socialist riculture in the Bulgarian Peoples' Republic, discusses e measures that have been implemented by the Bulgarian mmunist Party and the people's government to revive and velop agriculture and to build a socialist economy in ople's Bulgaria. The author analyzes the conditions which termined the taking of the road of socialism by the peas-masses, and he shows how the Bulgarian CP is creative-applying, under the specific conditions of its country, the eas of Lenin's cooperative plan. The book examines the sic principles underlying the organization of labor coop-atives on agricultural enterprises (the TKZKhes), ques-ns of land-ownership, land utilization, the organization of oduction on agricultural enterprises, procedures for ac-mulating indivisible funds, problems involved in the mbination of personal and communal interests, and also ans for the economic stimulation of the further development of the TKZKhes.

A Collective Work on Building Communist Society in the USSR

The Publishing House of the Academy of Sciences of the USSR has published a collection under the title of Problems of Communist Construction in the USSR. The collection offers the materials of the learned sessions of the Department of Social Sciences of the Academy of Sciences of the USSR, devoted to problems of the transition of our country to communism. The book opens with an opening address by A. V. Topchiyev. Then follow reports by K. V. Ostrovityanov on Certain Problems of Communist Construction in the USSR and the Tasks of the Social Sciences, by M. B. Mitin on The Role of Marxist-Leninist Ideology in Communist Construction, by P. N. Fedoseyev on The Development of Production Relations in the Transition from Socialism to Communism, by B. G. Gafurov on The Building of Communism and the Nationality Question, by P. S. Pomashkin on The Development of the Function of the Soviet State in the Process of Transition to Communism, by L. M. Gatovsky on Commodity-Monetary Relations in the Period of Transition from Socialism to Communism, by A. A. Arzumanyan on The Rivalry of the Two World Systems, by V. R. Shcherbina on Soviet Literature in the Struggle to Build Communism.

The collection also includes speeches by P. N. Pershin on Raising Kolkhoz-Cooperative Ownership to the Level of Public Ownership, by S. P. Tolstov on Certain Problems of Ethnography, by E. N. Pavlovsky on The Cultural Growth of the Peoples of Central Asia, by T. S. Khachaturov on The Role of Technical Progress, by V. S. Nemchinov on The Development of Commodity-Monetary Relations, by Ya. A. Kronrod on Contradictions in the Development of the Socialist Economic Structure and Ways to Solve them, by K. A. Meshkauskas on The Over-All Development of Economic Raions, by I. V. Pavlov on Forms of Legal Regulation of Social Relations in the Transition to Communism, by V. V. Nikolayev on The Role of the Soviet State in the Building of Communism, by D. Kshibekov on The Development of the Kolkhoz System, by V. P. Dyachenko on The Outlook for the Development of Commodity-Monetary Relations, by M. S. Strogovich on Certain Problems of the Soviet State and Law, by T. A. Zhdanko on Ways to Transform the Life of the Peoples of the USSR, by G. A. Prudensky on The Reserves of Socialist Production, by I. I. Mintz on Certain Tasks of the Social Sciences, by Yu. D. Desheryev on The Development of the Peoples of the USSR, by G. T. Kovalevsky on The Economic Nature of Indivisible Funds, by V. Ya. Aboltin on Economic Relations with the Capitalist World, by A. M. Aminov on Distinctive Features of Communist Construction in the National Republics of Central Asia and Kazakhstan, by Ta. A. Stepanyan on Contradictions in the Present Stage of Transition from Socialism to Communism, by M. Ya. Sonin on Ways to Raise the Cultural-Technical Level of the Workers, by K. A. Ivanov on The Significance of Architecture in Communist Construction, by V. F. Golosov on The Tasks of Philosophy in Connection with the Building of Communism, by A. I. Pashkov on Certain Problems of the Economic Theory of Socialism, by N. A. Tsagolov on The Two Forms of Socialist Ownership, and by S. N. Bratus on The Legal Regulation of Property Relations in the USSR.

The collection closes with the concluding remarks of P. S. Pomashkin, P. N. Fedoseyev, K. V. Ostrovityanov and A. N. Nesmeyanov.

G. Lisichin:*

Labor Remuneration on Kolkhozes

The decisions of the XXIst Congress of the CPSU set agricultural workers momentous new tasks the fulfillment of which depends to a considerable degree on the widespread involvement of the kolkhoz peasantry in their solution, and on their more intense activity on the job. Under the present conditions, therefore, problems dealing with the material stake of the kolkhozniks in the results of their labor acquire especially great importance. The new plans, which our kolkhozes are now setting about to fulfill, require the systematization and adjustment of the entire business of the organization of labor remuneration on kolkhozes.

Special attention should be given in this connection to the degree of participation of each kolkhoznik in the creation of gross kolkhoz income and to the corresponding distribution of consumers' funds.

As is known, not all of the gross product generated by the kolkhoz is distributed among the kolkhozniks: part of the product is set aside for the restoration of seed and feed supplies, etc., consumed by the production process; another part goes into the further expansion of artel production; and yet another part is transferred to the state. The remainder is distributed among the kolkhozniks in accordance with the quantity and quality of their work. As with the product generated by workers at socialist state enterprises, the product generated by the kolkhozniks is not broken down into necessary and surplus. But, unlike state enterprises, kolkhozes exhibit a distinctive feature in this respect: here the necessary product is created not only by labor in the communal farming of the kolkhoz, but also in the personal, subsidiary farming of the kolkhoznik.

The existence of the subsidiary farm contains within itself the danger of a breach of equality in distribution. An increase in the amount of labor put into the subsidiary farm results in a decrease in the amount put into communal farming. Hence, wherever a few kolkhozniks exaggerate the importance of subsidiary farming to the detriment of their work on the communal farm, in our view, errors arise in the equal distribution of the necessary product for trudodens worked, and violations of the law of equivalent exchange, which requires that the labor of the kolkhoznik be paid in accordance with the work he has contributed minus the portion put into communal needs, for, under existing conditions, this deduction is made only from that part of his contribution that was put into the communal farm. By this means, such a system of distribution places in a more favorable situation those kolkhozniks who have emphasized their own subsidiary farming to the detriment of the communal farming. The result is that a few kolkhozniks put most of their labor into their own private gain from their subsidiary farming, shifting their share of responsibility for increasing kolkhoz production onto the shoulders of others, conscientious kolkhozniks. A considerable quantity of labor is diverted from the communal to the private sector. The growth of kolkhoznik labor activity in the working class spirit is slowed down.

In order to overcome this contradiction, the Lenin kolkhoz, Poludinsky raion, North Kazakhstan oblast, worked out a new system of labor remuneration in 1956 — on the basis of the measured extent of interested and active participation of the kolkhozniks in communal farm work. It was introduced as of January 1, 1957 and, with amendments made by the kolkhozniks over the last two years, is constituted as follows: The minimum monthly labor participation of the kolkhozniks is set for the year. Failure of the kolkhoznik to fulfill this minimum will entail a cut in his trudoden remuneration and loss of his right to three weeks paid leave. For example, if an able-bodied kolkhoznik does 25 labor turns, he receives full trudoden payment as established on the kolkhoz; if he works 15 to 25 turns, his pay for each trudoden worked is cut by 25 per cent; if he works less than 15 turns, he trudoden pay is cut by half. The number of labor turns per month and the scale of trudoden pay cuts for non-fulfillment of the established number of work turns is the same for girls and childless women as for men. During the months when the creches are in operation, women who have children are paid in full for their credited trudodens if they appear for their work turns not less than 15 times a month. But if they have worked from 10 to 15 turns in a month, their trudoden pay is cut by one fourth, and if they work less than 10 turns, then by half. During the period when the creches are not operating, kolkhoznik women are paid in full regardless of the number of turns they have worked. The percentage of trudoden pay cuts was set intentionally high by resolution of a general kolkhoznik assembly to ensure an increasing participation of the kolkhozniks in the work.

We will give an example to show how the new system works. Last year the Lenin kolkhoz paid out monthly advances at the rate of 3 rubles per trudoden. Able-bodied men, girls and childless women who worked 25 or more turns a month received 3 rubles per trudoden; those who worked from 15 to 25 turns — 2 rubles 25 kopeks; those who worked less than 15 turns in a month got 1 ruble 50 kopeks per trudoden. This sytem was also set up for trudoden payments in kind. During the final summing up at the year's end, the total of turns worked is divided by 12 months to give the average monthly number of turns worked by the kolkhoznik, and the total of his trudoden earnings in money and in kind is worked out for the entire year in accordance with the established pay scale. If, due to an insufficient number of turns worked, the kolkhoznik is not paid in full, he then also forfeits the right to leave with pay. Under this system, a "turn" is regarded only as a day on which the kolkhoznik fulfills an established output norm. If the kolkhoznik fails, with sound reasons, to fulfill the norm, then trudodens are credited to him for the work he has done and the work turn is not entered in the same way as willful absenteeism. Since there is less work to be done in wintertime, especially by women, the number of norm-turns to be fulfilled is varied for each season: during summer and autumn the number is greater, and less in winter and spring.

The new system of differential trudoden remuneration to kolkhozniks, combined with monthly advances, has contributed to a sharp rise in the level of their on-the-job performance. The kolkhozniks now arrive of their own accord at the brigade camp at the appointed time; here the brigade leader hands them detail slips which are registered

fficially by the accounting clerk on the spot. The slips re filled in with the assigned tasks, the applicable rates and ie number of trudodens to be credited on completion of the ork. The slip is signed by the brigade leader and the per- on who performs the work. On the basis of these slips, hich are submitted each week by the brigade clerk to the olkhoz accounting office, the number of work turns and udodens earned is computed. The kolkhoz has thus been elieved of the confusion and trudoden losses that occurred nder the former computation system. The number of orkdays put into communal farming as a whole has gone o. Thus, whereas in 1956 the kolkhozniks put in only about 0 thousand workdays, by 1957 the number had risen to 82 ousand. The monthly average of days worked by the kolk- ozniks on kolkhoz jobs rose from 18 to 23.5, i.e., each of em put in 66 days more during the year than in 1956. The crease in the number of work turns was due to a rise in the egree of participation of the so-called "average" kolkhoz- ks in the work of the kolkhoz. As for the kolkhozniks who d been putting most of their work into their own private rms, after the introduction of the new form of labor re- uneration, anyone who, without justifiable reason, did not t in the required trudoden minimum was obliged, in ac- rdance with the decision of the general assembly, to make ditional payment to the kolkhoz treasury for livestock sturage (at the rate of 15 rubles a month per head of cat- e and for other types of livestock in terms of cattle). In dition, these kolkhozniks were required to pay market ices for livestock hay mowed by the kolkhoz if their priv- e farming plots held more than one cow. This measure t results and, in 1958, the work performance level of the lkhozniks rose even higher.

After the introduction of differential trudoden remunera- n on the Lenin kolkhoz, the kolkhozniks in several bri- des began to request of the kolkhoz management that a mber of projects be set up in these brigades in the con- ruction of which they could actively participate, thereby abling them to fulfill their yearly work turn norms. As a sult, the communal activities of the kolkhoz began to de- lop at a faster pace: a pigsty, facilities for draught ani- als, etc., were built.

The positive results of this differential wage experiment ve induced neighboring kolkhozes to introduce this kind norm-turn based labor remuneration. Thus, this pay stem is now being applied at the Chapayev, Thaelmann, Paris Commune, Red Banner, 30 Let Kazakhstana (30 Years of Kazakhstan), Victory and other kolkhozes of the Poludinsky raion, and also at a few kolkhozes in other regions of the North Kazakhstan oblast. The chairmen of these kolkhozes feel that the combination of differential labor remuneration and monthly advances has provided an effective incentive to a greater number of kolkhozniks to put in more regular work in the communal farm sector.

Labor rates and scales are of huge importance in the drafting of a correct kolkhoz wage system. These problems are especially important now, after the sale of the MTS equipment to the kolkhozes. Together with the new equipment the kolkhozes acquired a large army of machine-operators, who are now performing over 90 per cent of all field operations in the basic grain regions. In the course of discussions of problems relating to the transfer of MTS equipment to kolkhozes, our newspapers and journals have more than once touched on the question of machine-operated pay under the new conditions. However, the discussion dealt mainly with operators who had gone over to the kolkhozes from the MTSes, most writers having advocated retention of the guaranteed wages, norms and rates in effect at the MTSes prior to the reorganization. While the great reorganization of the kolkhozes was in progress, the decision to retain guaranteed wages for machine-operators was, of course, the only correct one. But by now, taking into consideration the high level of development of our kolkhozes, it must be remarked that this system is ceasing to satisfy the kolkhozes and kolkhozniks.

Its principal defect consists in that, as before, the machine-operator's labor is rated on the basis of the number of hectares put under soft tillage instead of on the quality of his work. This cannot enlist the interest of the machine-operator in the quality of field work performance and in the size of the harvest. Besides, the norms and trudoden rates for the work of machine-operators, formerly in effect on the MTSes and mostly based on some fixed quantity, are now being applied together with kolkhoz norms and rates, which are based to a considerable extent on the subjective decisions of this or that interested group of kolkhozniks. Under such conditions, the machine-operator turns out to be in a worse position, in the matter of crediting trudodens, than any kolkhoznik on another job. This is borne out, for example, by the following data on the Lenin kolkhoz:

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	Trudodens* Worked in 1956	Trudodens Worked in 1957	Number of Working Days in the Year (1957)	Average Daily Earnings (in Trudodens)	Variation in Crediting of Trudodens (in %)	Variation in Crediting of Trudodens in Respect of Working-Day Length (in %)
Milkmaid	745	842	347	2.4	109	136
Cattle-Farm Worker	757	831	346	2.4	109	136
Tractor-Driver	640	680	298	2.2	100	100
Swineherd	555	762	289	2.6	112	140
Driver	669	641	263	2.4	109	136
General laborer	479	552	244	2.2	100	100
Teamster	414	453	200	2.2	100	100
Shepherd	830	880	259	3.3	150	188

(* Trudodens — work-day units)

t may be seen from the above table that the tractor ver works fewer trudodens than cattle-workers and only slightly more than the unskilled, general laborer. Since the working day of the machine-operator is, on the average,

2-2.5 times longer than that of other kolkhozniks, an even greater levelling results between wages paid for simple and for complex, skilled work — which causes incalculable harm to production. This is not only characteristic for the Lenin kolkhoz, but also for other kolkhozes in the same raion: the Thaelmann, Chapayev, Paris Commune and others, the wage variation percentage fluctuating within roughly the same limits. On the basis of data from other raions and oblasts (for example, the following variation existed on one kolkhoz of the Kurgan Oblast: tractor-driver — 100 per cent, milkmaid — 117, stableman — 103, shepherd — 152 and swineherd — 108 per cent) it may be concluded that this situation is extremely widespread.

So long as the pay for the kolkhoz trudoden was low and the wages of machine-operators were paid by the state, this was not of any particular importance. It is quite a different matter now, under the new conditions, when a difference in the number of trudodens credited means a difference in direct wages. Many tractor-drivers are now rightly saying that, if kolkhozniks in other job classifications can earn as much as, or slightly less in actual wages, then why should they work on tractors when there are other ways of earning the same money much more easily. It has been observed on several kolkhozes in this connection that experienced tractor-drivers transfer under varying pretexts to livestock work or other jobs, leaving the machines to inexperienced trainees; this has a negative effect on the quality of the work, as well as on the technical condition of the machinery.

The machine-operator is a decisive, central figure in kolkhoz production, and hence every kolkhoz chairman is striving to maintain and enlarge the machine-operator cadres on his farm. A few kolkhozes are attempting to restore a correct correlation between the wages of tractor-drivers and the other kolkhozniks, increasing the trudoden pay of the former to 10-15 per cent more than that of the latter. For example, on the Iskra (Spark) kolkhoz, Brest oblast, where the trudoden is more substantial than the guaranteed minimum, it was decided to pay the tractor-drivers, combine-operators and machinists 10 per cent more than the average trudoden wage for the kolkhoz. But this measure is only admissible as a stop-gap to provide a short-run operative solution to a most sorely urgent problem. As a metter of fact, such an increment violates the basic principle of socialist wages "for equal work, equal pay." It gives bad workers the impression that even if they work slackly they will still be paid more highly than the others, while it deprives conscientious workers of any incentive to improve their work still more. Besides, a 10-15 per cent increase in the wages of machine-operators by no means guarantees that, under the present kolkhoz job-rate fixing procedures, workers in other fields of skill will not be paid more for work requiring less skill. Thus, at the above-listed kolkhozes of the North Kazakhstan and Kurgan oblasts, the wages of tractor-drivers would have to be increased for no sound reason by 50 per cent if they were by right to exceed the pay of a shepherd, and this would only lead to another extreme — too great a gap between their wages and those of kolkhozniks on other jobs.

Two conclusions follow from the above: the first is that the problem of the wages of machine-operators, who do more than 90 per cent of all field work, must not be left unsolved at the present time; and the second is that the problem of their wages cannot be solved by itself, apart from the improvement of the wage situation for all kolkhozniks. This over-all improvement requires that the procedures and criteria for fixing kolkhoznik wage rates and scales be straightened out and systematized.

As we all know, our kolkhozes for several years have been grouping standardized horse-drawn and manual operations under a 9-grade tariff scale of unified rates for the purposes of trudoden pay. However, a great lack of coordination has been observable at the present time in rates for standardized jobs even on kolkhozes whose conditions are identical. This is pointed up, for example, by the following data on rates in terms of trudodens for the same jobs on several kolkhozes of the Poludinsky raion:

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Job	Kolkhozes		
	Red Banner	Stalin	Lenin
Cow tending	1.75	1.25	1.5
For milking 100 liters of milk (in winter)	3.0	3.0	2.5
Calf tending	1.25	1.30	not paid
For absence of barrenness in cows (for one year)	25	20	30
For each new calf	2.0	2.5	2.5
For care of oxen	1.75	1.75	2.5
For digging 1 thousand holes for transplanting seedlings	0.65	0.25	0.75
For winnowing wheat on the OV-10 grain-cleaning machine (for 150 quintals)	3.7	6.0	6.25

Even the truck drivers of different kolkhozes in this raion receive unequal wages although they have to travel the very same road — to the grain elevator, town, etc. Thus in 1957, for driving a Zis-150 truck over a distance of 100 kilometers, the Lenin kolkhoz credited 1.75, the Chapayev kolkhoz 3.25 and the Stalin kolkhoz 2.5 trudodens. Similar facts are also noted on kolkhozes in other regions of the country. At the Red Dawn kolkhoz, for example, in the Smolensk raion Smolensk oblast, 4 trudodens were credited for the manual planting of 1 hectare in potatoes, while at the neighboring Conquest of October kolkhoz, 11.3 trudodens were credited. At the 15 Years of October kolkhoz, Gzhatsk raion, same oblast, an extra 0.45 trudoden was credited to hay-mowers ... for each scythe they sharpened. And the Worker's Way

olkhoz has gone so far as to give trudoden credit not only or work done, but for the distance covered in reaching the ork site; this credit amounted to 0.06 trudoden per kilo- ieter. And at the Red Partizan kolkhoz, teamsters re- eived an extra 1.5 trudoden credit for tossing flax sheaves f their carts. All this had led to a squandering of trudo- ens, and to breaches of labor discipline.

Kolkhoznik wage scales are also in need of revision, not ily in respect of the number of grades in them, but of the fferential intervals between these grades. At the present me, most agricultural jobs are classified under Classes I and IV, while jobs related to mechanization are not assified as a rule. And, whereas the ratio of lowest to ghest paid job in the other branches of material produc- on is of from 1:1.25 to 1:4.06, the differential interval be- een job categories being of between 10 and 15 per cent, r kolkhoz work, in spite of the fact that the job scale con- ins fewer categories than industrial scales, this ratio is 1:5. The differential intervals between job categories are also unjustifiable: between categories I and II — 50 per cent, between II and III — 33.3 per cent, between III and IV — 25 per cent, between IV and V — 20 per cent, between V and VI — 16.7 per cent, between VI and VII — 14.3 per cent, between VII and VIII — 12.5 per cent, and between VIII and IX — 11.1 per cent. As a result of such a sharp contrast between skilled and unskilled labor, it is hard to find people on kolkhozes who are inclined to do jobs classified under categories I and II. Flaws in job scales move many kolkhozes to invent new categories in their own account, inflating the job scale to include up to 18-20 categories which, naturally, does nothing to improve the kolkhoz wage system.

Nor is there any regularity in kolkhoz job standardization. On many kolkhozes where conditions are exactly the same, varying standards are in force for the same job, as pointed up by the data given below for certain kolkhozes in the Poludinsky raion.

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Job	Kolkhozes		
	Lenin	Stalin	Thaelmann
Winnowing wheat on OV-10 grain-cleaner (4 men; in tons)	120	150	250
Stowing silage in pit (2 men; in quintals)	100	300	200
Digging holes for seedlings in soil (1 man; in thousands)	2	1	6
Plucking and cleaning cabbages for shipment (1 man; in quintals)	30	20	50

Indeed, certain kolkhozes draw up rates only on units of rk, and without any connection with output norms and es at that, in consequence of which the kolkhozniks, for nt of a daily production goal such as would be provided, a matter of fact, by output norms, work blindly, as it re. Such a standardization cannot but lead to wage-level- g. We studied data on 300 work-turns for the fulfillment output norms by siloing machine loaders and for horse- wn conveyance of feeds. And it further turned out that st kolkhozniks had been fulfilling the established norms 185 per cent. Such a large overfulfillment percentage s also observed in a series of cases in cattle, plant- owing and other jobs. When some norms are raised so h that it is almost impossible to fulfill them, and others brought so low that the overwhelming majority of the khozniks fulfills them by 150-200 per cent, the principle distribution according to work done is violated and some khozniks will inevitably receive inflated wages at the ex- se of others.

Kolkhoznik wage flaws develop when the overwhelming jority of kolkhozes work out and ratify output standards rates for so-called normatives. As we know, the collec- farm Statute grants the right to approve normatives on- o the general assembly or a council of delegates. Fail- to take into account the developmental level achieved by kolkhoz, often not looking into the job scales and lacking wledge of the laws of wage development, some kolkhoz- s at such assemblies manage to get approval for norm uctions and increased rates on jobs in which either they mselves or their relatives are interested. As for the kkeeping department, it is in many cases unable to pre- e an adequate argument in favor of correct output norm rate determination for kolkhoz jobs because it lacks the necessary experience and the time. This cannot but have a negative effect on the elaboration of normatives and inevitably leads to the squandering of trudodens, to their depreciation, to a relaxation of labor discipline and, in the final analysis, to higher unit production costs.

Comrade N. S. Khrushchev has said: "The planning of trudoden expenditure and seeing to its correct management — these questions should always be the objects of unflagging attention by party and Soviet agencies and by kolkhoz management. The trudoden must be made to mean more and carry greater weight, and cases of trudoden squandering be examined as painstakingly as we examine cases of squandering of kolkhoz communal property."[2]

It is therefore necessary that the organization and remuneration of kolkhoz labor be placed on a scientific foundation and also that these problems be brought to the overriding attention of the competent agencies. To this end it is first of all necessary that they be properly worked out on the raion level. The presence in the raion of the chief agricultural inspection agronomist, the selectionist, the veterinarian, the chief livestock expert, etc., helps kolkhozes correctly to organize these respective branches of farming and to set up supervision procedures for them. But there are no people on the raion level who could be responsible for the adjustment of kolkhoz wages. It is hence not surprising that shortcomings in kolkhoznik wages and violations of the socialist principle of distribution according to work done can remain unperceived for years on kolkhozes.

In an attempt to eliminate the more flagrant errors in job standardization and rate-fixing, certain kolkhozes of the Poludinsky raion have suggested that normatives be worked out by all the kolkhozes together, and that the version of standards and rates so arrived at be ratified separately by each kolkhoz in the raion. During the examination of this

problem, great disparities were discovered in the norms and rates in force on the various kolkhozes for exactly the same jobs. In spite of the fact that the over-all normatives that had been worked up were not scientifically sound, a simple comparison of the normatives of various kolkhozes where conditions were the same helped to select more progressive norms for various jobs. The obsolete system for the payment of the kolkhoz chairman has also been changed: it is now pegged to the farm production yield. An acute need has also been pointed up for a permanent consultative body, or even special sections on kolkhoz wages, to be attached to the agricultural inspectorate of the raion.

The creation in the raion of a consultative body on kolkhoz wages would contribute significantly to the elimination of the existing lack of coordination in this business. The need for creating such bodies is also dictated by the circumstance that wage factors are extremely mutable, and economically sound corrections should be made yearly in existing normatives, and even oftener in some types of work; these corrections should take account of the growth of labor productivity in the kolkhozes of the raion, of mechanization and the generation of new jobs. The work of such bodies should include the organization of time-studies and kolkhoz job standardization, the drawing up of rates for fulfillment of norms in accordance with the tariff scale, supervision of the crediting and expenditure of trudodens on kolkhozes, the formulation of recommendations on bonuses and supplementary pay, to watch out for the proportional rise of the wages of all the kolkhozniks, and the trying of all labor disputes that arise on kolkhozes.

Such bodies will help to avoid both haphazard elements the solution of kolkhoz wage problems and excessive centralization in kolkhoz standardization. In this case, a method should be worked out at the raion center for the solution of basic kolkhoz wage problems. The skilled leadership of special raion bodies which can be responsible for the correct organization of wages on kolkhozes and prepare reasoned recommendations to kolkhozes on these problems, will make it possible to put kolkhoz wages in order, to draw up scales and compile normatives on new types of kolkhoz jobs that have arisen as a result of the transfer of MTS equipment to kolkhozes, and of the erection of shops on kolkhozes for the maintenance of this equipment. What is now being done by the individual kolkhoz in standardization and labor remuneration in an ad hoc and amateurish fashion, can and should be centralized by raions and zones where the same conditions prevail, in order to put this work more firmly in the hands of specialis

DECISIVE LANDMARK (Continued From Page 10)

their experience will make it possible to bring enormous hidden production resources into operation and to accelerate the development of our society on the road to communism.

LAGUTIN AND SKURATOV (Continued From Page 16)

and contains substantial reserve capacities. These reserves, said Comrade N. S. Khrushchev, provide great possibilities for further improvement in the living standard of our people. If the workers in all factories work well and over-fulfill the plan by approximately 2%, the country would gain more than 900 billion rubles' worth of products during the seven-year plan. These products would go to further construction of housing, kindergartens, day nurseries, and boarding schools.

There can be no doubt that the Soviet people will employ these resources and that a new, grandiose plan, will, like its predecessors, be not only fulfilled but over-fulfilled. A guarantee of this is the broad development of a nationwide movement throughout the country for fulfillment of the seven-year plan assignments ahead of time.

DUDINSKY (Continued From Page 22)

mankind, are realizing the great Leninist principles of proletarian internationalism, constantly strengthening the world system of socialism, and inspire the working people of all countries to struggle for transition to a new social sys

OSADKO (Continued From Page 50)

payment of labor among collective farms is a consequence of a more complete utilization, by the collective farmers, of their personal capacities.

At this stage of development of the collective farm system, the existing difference between the form of distribution in accordance with labor in the collective farm and the government-owned sectors will be finally overcome. The fact that wages in the collective farms expressed the share of the collective farmer in the social product through his sha in the income of a collective farm will be no more than a formality. In essence, it will express the share of the wor er in the social product directly. This will erase the diffe ence between the working class and the peasantry as to fo of distribution in accordance with labor and quantity of pay

. Rubinchik:

Conference on the Improvement of orms of Labor Remuneration i Kolkhozes

The seven-year plan for the development of the national nomy of the USSR during 1959-1965 contemplates a far-aching program for the further economic expansion of country. In the area of agriculture, it is intended to in-ease gross production in 1965 to 70 per cent more than 1958 figure. This goal should be achieved above all by siderably intensifying the harvest yield of farm crops, reasing the livestock population and raising the produc-ity of livestock. In the struggle for higher indices in m production, the rational organization and standardiza-n of kolkhoz labor and the effective utilization of all labor sources acquire considerable importance for the purpose ncreasing the output of farm produce as much as possi-. It is of decisive importance to this end to apply on khozes a progressive wage system which can help to in-ase the material stake of the kolkhozniks in the results heir labor and reinforce the communal sector of the khoz economy.

On the initiative of leading kolkhozes and supported by lo-party organizations, many agricultural artels have in last few years begun to apply a new wage system, which nulates the kolkhozniks to work harder.

The All-Union Scientific Research Institute on Agricultur-Economics (VNIESKh) is giving a great deal of attention he problem of a rational kolkhoz wage system. Starting 956, it has been doing research on existing wage sys-s. In the course of this research, it was discovered guaranteed pay for trudodens worked, with monthly ad-ces, had become the most effective form of labor re-neration, and stimulated the kolkhozniks to work harder, well as increasing their productivity. Further study of ctical conditions showed that, at the present stage in the elopment of the kolkhoz order, the most progressive tem, and the one that promises the most for the long-, is the guaranteed monetary kolkhoznik wage (in which crediting of trudodens is omitted) based on fixed mone-y rates for standard outputs or production units. Since 7, and especially since 1958, various kolkhozes in the ntry have begun to employ such a system with the active port of local party and soviet agencies.

n order to promote the exchange of experiences in the lication of this system and to summarize this experi-e for the purpose of working out pertinent recommenda-s, the VNIESKh, in September, 1958 in Moscow, ar-ged a conference of kolkhoz chairmen and accountants n the various zones and republics of the USSR.

pening this conference, A. I. Tulupnikov, the Director of VNIESKh, remarked that, whereas at socialist enter-es in the USSR wage earnings are regarded as produc-costs and regularly paid out to the workers of the enter-e in pre-established guaranteed amounts, on kolkhozes ays for labor remuneration have not been included in duction costs and have been paid out last of all to dis-ute the remainder of the kolkhoz income. The kolk-hozes have been persistently searching for an improved form of labor remuneration. Since 1956, many farm collectives have begun to introduce guaranteed monthly payments for trudodens worked, and some of them have gone over to monthly wages based on fixed monetary rates for standard outputs or product units.

On the basis of the researches conducted by field units of the VNIESKh, and also of a study of the experience of many kolkhozes, the Institute has come to the conclusion that at the present stage, this guaranteed wage can be best applied at a uniform level — roughly at the level of the wages being paid in sovkhoz workers in the same zone. There can be no question but that the changeover to the new wage system will require substantial changes in the existing procedure of income distribution on kolkhozes, in the determination of the size of the gross output, production costs and net income, and also in the correct distribution of incomes by which the interests of the state would be safeguarded, and an expanded reproduction of the community economy and a rise in the material welfare of the kolkhozniks would be secured. This wage procedure opens up great possibilities for the large-scale introduction of cost accounting and the computation of kolkhoz unit production costs, and also for the perfecting of a system for the levying of income tax on kolkhozes. In the opinion of Comrade Tulupnikov, it is more correct to collect income taxes from the kolkhozes and kolkhozniks separately: from kolkhozes — a fixed percentage of the net income, depending on the profitability of their activity, from kolkhozniks — as from workers and employees.

The participants in the conference noted as one in their speeches that, at the present time, remuneration based on the trudoden no longer promotes the further expansion of the kolkhoz economy and, in several instances, is even acting as a drag on the development of kolkhoz operations. Thus, P. V. Vasilyev, chairman of the "Druzhba" (Friendship) kolkhoz, Kingisepp raion, Leningrad oblast, pointed out that remuneration based on the trudoden very often does not guarantee the kolkhonzniks fixed, regularly paid out wages, and this weakens their personal involvement in the results of their labor and in reinforcing the communal sector. In addition, the basic and supplementary trudoden payments in kind considerably diminish the ratio of commodity output to total kolkhoz production, and divert the kolkhozniks from participation in communal production for the time needed to sell the produce they have received on the market.

Comrade Vasilyev noted that, when the kolkhoznik is guaranteed a fixed wage and he knows how much he will receive for his work, he performs more productively and displays initiative and concern for enlarging the communal sector. Comrade Vasilyev also thinks that economically backward kolkhozes should be helped at first with advances and short-term credits for the creation of special funds from which to settle accounts with their kolkhozniks. The creation of such funds will make possible, especially during the first half-year, the regular payment of guaranteed wages also on farms where no transitional cash funds have as yet been set aside.

In connection with the introduction of guaranteed monetary wages, Comrade Vasilyev deems it advisable to reduce the size of the kolkhoznik's private plot which, in the

Leningrad oblast, is evolving from an auxiliary into the chief source of income of the artel member, diverting him from work on the communal farm.

A. D. Gonashvili, chairman of the First of May kolkhoz, Tsiteltskaroisky raion, Georgian SSR, also spoke of the advisability of reducing the size of the private farmstead and the number of cattle in the personal use of the kolkhozniks. A. M. Akhundov, chairman of the Pushkin kolkhoz, Lenkoran raion, Azerbaijanian SSR, reported on preparations being made on his kolkhoz for the changeover to guaranteed monetary wages; he also stated that, in accordance with a resolution taken by the assembled kolkhozniks, the size of their subsidiary private homesteads has been reduced from 0.31 to 0.2 hectares, and the number of cattle in private use has been limited to one cow and two young animals. Comrade Akhundov raised the question of the advisability of setting up not only transitional, but also general kolkhoz funds to be used if the farm production-plan has not been fulfilled due to meteorological conditions, natural calamities or other causes.

In the opinion of V. P. Khizhnyakov, secretary of the Tapa raion committee of the Estonian CP, the trudoden often conceals the true magnitude of the kolkhoznik's income. Thus the Kalevipoeg kolkhoz in 1957 paid out 5 rubles and 1.5 kilograms of wheat for each trudoden worked, and also provided extra pay and prizes in kind. The value of these products, converted in terms of state purchase prices, raised the trudoden rate to 10.5 rubles. Under existing, often understated, output norms field workers are credited with 2-3 trudodens (an average of 28-33 rubles), and livestock workers with 4-5 trudodens (47-53 rubles). In order to judge whether or not trudodens are being correctly expended, the output norms and rates must be known. But each kolkhoz has its own extremely imperfect and unscientific output norms, and their assessment in trudodens does not give a correct idea of the productivity of labor and the profitability of operations, and does not permit a correct comparison of the effectiveness of the various operations. Trudoden remuneration in kind leads, moreover, to the unrational utilization of food supplies of kolkhozes.

Comrade Khizhnyakov reported that 20 out of 27 kolkhozes in the Tapa raion are changing over to the guaranteed monetary monthly wage in 1959, two kolkhozes having already done so in 1958. As resolved by the members of these two kolkhozes, the output norms in effect at sovkhozes and somewhat higher rates, especially for basic jobs, were taken as a basis for the working out of the new norms and rates.

The earnings of the kolkhoz chairman are pegged to the volume of production. For example, for the production of a ton of wheat he receives 9 rubles, and for a ton of potatoes — 3 rubles 50 kopeks. The chairmen of both these kolkhozes get 1,100-1,350 rubles a month if the plan is fulfilled; the agronomist or livestock expert with advanced training gets 90 per cent, and the brigade leader and farming section boss get 70 per cent of the chairman's earnings. The kolkhozniks receive their earnings every month in full, and the employees of the administrative-managerial staff only 80 per cent of their earnings, the remaining 20 per cent being paid out to them at the end of the year. The earnings of a milkmaid on these two kolkhozes reach 1,000-1,200 rubles per month and those of a swineherd 1,800. Whereas the average worker in the raion earns 820 rubles per month, the kolkhoznik who works 24 working days on communal operations earns 777 rubles, and even more if his income from subsidiary farming is taken into account. Comrade Khizhnyakov, like other participants in the conference, believes that state social insurance should be extended to the kolkhozniks.

Considerable interest was aroused among the members of the conference by reports by chairmen from kolkhozes where some experience has already been acquired in the use of guaranteed wages based on monetary rates. The chairman of the Bolshevik kolkhoz, Shostkin raion, Sumi oblast, K. E. Tsybenko, reported that the monetary income of this farming artel, located in a wooded district, was low up to 1951.

The kolkhoz has been paying its kolkhozniks guaranteed wages for standard outputs or for piece-work production since January, 1957, but the preparations for this were begun as early as 1951. It was then that a transitional reserve fund of 100 thousand rubles was set aside for the payment of advances to the artel members at 1 ruble per trudoden. Later on, 5-10 per cent of the monetary income was assigned to this reserve fund each year. In 1956 the kolkhoz paid out advances at 10 rubles per trudoden, but unevenly, which acted negatively on labor discipline and productivity. But when the kolkhoz went over to guaranteed wages, without the trudoden and in accordance with fixed cash rates, and each month paid out all wages earned, a positive change was observed in the labor performance of the kolkhozniks from the very first days.

Production organization was revamped in advance at the Bolshevik kolkhoz. The former several field, tractor and livestock brigades were replaced by three new production tractor brigades headed by their brigade leaders and their deputies (for field work, livestock tending and mechanization). The brigade production-financial plan determined the gross production output, the limits of permissible expenditures, the size of the wage fund and production expenses, and computed the unit cost price on each crop. Since early 1958 all brigades have been put on a cost accounting basis. After the work reorganization and the introduction of the new wage system, the productivity of kolkhoznik labor rose 18 per cent for the year and the economic performance figures for the collective sector improved. Output norms have been revised several times and lower norms have been set for some jobs than are in effect at neighboring sovkhozes. In the opinion of Comrade Tsybenko, kolkhoznik earnings should only approximate, but not exceed the earnings of the industrial worker.

The earnings of the administrative-managerial employees on the Bolshevik kolkhoz depend on the volume of production in each kolkhoz branch. The average production volume over the last 3-5 years, increased by 15-20 per cent, is taken as a basis for computation. At the end of the year part of the net profit is distributed among the kolkhoz members in proportion with their earnings, the remainder being plowed back in for expanded reproduction in the communal sector. During the last five years not over 45 per cent of the revenues have been spent at the Bolshevik kolkhoz for wages, which has made possible the intensive development of productive, cultural and domestic service construction. Comrade Tsybenko is of the view that certain kolkhozes of the Uzbek, Kazakh and Moldavian Union Republics, which enjoy high monetary returns, are incorrect in applying the bulk of their income exclusively for trudoden cash wages. Kolkhoznik wages should be so regulated as to provide a large share of monetary revenue for the expansion of reproduction in the communal sphere.

The progressive character of the new wage system consists, in the view of Comrade Tsybenko, in that it increases the responsibility not only of leaders, but of all the kolkhozniks for improving the economic situation of the agricultural artel.

Several participants in the conference favored the

troduction of guaranteed monetary wages not only on conomically sound, but also at backward kolkhozes, even they lack special purpose transitional monetary funds. ich artels may regulate the wages of their kolkhozniks at e beginning of the year by means of advances from purasing organizations and short-term bank loans, and later by drawing on cash income from the sale of the kolkhoz oduce.

A. L. Alperovich, chairman of the 13 Years of October lkhoz, Krasnogorsk raion, Moscow oblast, described the tuation of his kolkhoz in 1954 as follows: "The milk eld per forage cow did not exceed 1,100 liters, and 4-5 ns of potatoes or vegetables were harvested per hectare. udoden pay was wretched and there was much room for provement in labor discipline."

This farm artel managed to improve its economic posin by giving the kolkhozniks a material share in the bene-s from increased labor productivity and agricultural pro-ction while bringing down unit costs. In 1955 the kolkhoz stituted the payment of monthly advances at 5 rubles per udoden. The regular payment of such advances helped to ise the productivity of labor. The milk yield went up to 050 liters per forage cow and kolkhoz income rose to 959 ousand rubles.

When trudoden pay was raised to 7 rubles in 1956, the lkhozniks brought the milk yield per forage cow up to 00 liters and the potato yield to 10 tons per hectare. The come of the kolkhoz went up past the 1.7 million ruble rk.

Practice has shown, however, that the use of the trudo- as a basis for wage payments often results in the disation of labor resources and in the disorganization of st accounting. As of January of 1957, therefore, the khoz changed over to direct cash wages (omitting the doden). The field workers began to be paid on the basis of put norms, with bonuses for plan overfulfillment. The estock workers are paid per unit of final product. The rms have been worked out on the basis of the daily kolknik output.

Comrade Alperovich is of the view that the average kolknik earnings should be equal to the average earnings of rkers at nearby industrial and agricultural enterprises. 957 the average monthly wages of the kolkhozniks at the Years of October kolkhoz went up to 646 rubles (as comed with 38 rubles in 1954). Kolkhoz income reached 3.2 lion rubles and the wage fund 1.2 million rubles. In 7 the kolkhoz instituted the limited sale of farm produce olkhozniks, and in 1958 all produce was acquired by khozniks by purchase.

The distribution of part of the net income in accordance n base wages does much to stimulate the kolkhozniks to ner productivity. The higher his wages, the greater his re in distributed profits. Taking account of the impor-e of regular wage payments to kolkhozniks, Comrade erovich thinks that it should be proposed to the Ministry Finance of the USSR that kolkhozes be granted direct dit for the payment of kolkhoznik wages during seasonal rths of cash funds.

. A. Shevchenko, chairman of the Lenin farm artel, Lasky raion, Krasnodar krai, reported that in 1957 this choz based wage payments on two indices: output norms quantity of production output. When the productionncial plan of the kolkhoz began to determine the brie-by-brigade labor costs involved in the production of n of produce in each crop on the basis of the planned d and by each job, these labor costs declined consider-. The Lenin kolkhoz adheres strictly to its productionncial plan. If, for example, a brigade leader allows an overexpenditure of material and labor per unit product, the accounting department does not admit it for payment. The production plan pushes the brigade members to seek out ways of economizing on labor and of increasing their production output. Bonuses are paid at this artel for plan overfulfillment.

In 1957 this kolkhoz instituted the payment of trudoden wages on the following rate: 10 rubles in cash, 2 kilograms of wheat, 1 kilogram of vegetables and 0.5 kilograms of oil. This has helped considerably to improve the work performance of the kolkhozniks. Even in the drought year of 1957, 23 quintals of cereals were harvested per hectare of kolkhoz land. Later, wheat and other produce was issued as payment in kind for trudodens worked only in accordance with the requirements of the kolkhozniks, the value of the remaining produce being paid out in cash. This procedure gave the kolkhoz 40 per cent more produce, which otherwise might have been distributed for trudodens worked, to add to its forage and commodity stocks.

As of June 1, 1958, the kolkhoz instituted the payment of guaranteed wages without the trudoden according to fixed monetary rates per unit of output produced. Comrade Shevchenko laid special stress on the importance of reimbursing labor per unit output rather than per amount of work put in. He mentioned this example: at a neighboring kolkhoz, tractor work, in terms of soft tillage, comprised 8.7 hectares to the harvesting of 14 quintals of wheat per hectare, while at the Lenin kolkhoz, with a yield of 20 quintals per hectare, tractor work comprised only 3.7 hectares. In other words, half again as much wheat was harvested with less labor input. In 1958 the Lenin kolkhoz obtained up to 30 quintals of wheat per hectare. Practice has convincingly shown that when wages are geared to unit production, labor productivity is considerably increased and production goes up.

The trudodens accumulated to the credit of the kolkhozniks up to June 1, 1958, were assessed by the kolkhoz management at 15 rubles each. This was somewhat higher than the average wages being paid at the nearby sovkhoz.

The Lenin kolkhoz is typically concerned for the uninterrupted growth of the indivisible fund, which is basic to the reinforcement of the communal sector. In 1950, with an income of 1.6 million rubles, the indivisible fund stood at 1.9 million rubles, and in 1957, with an income of 16 million rubles, the indivisible fund grew to 23 million rubles.

In accordance with a new resolution introduced in the regulations governing the Lenin artel, 40 per cent of the income earned in excess of the planned figure is distributed among the kolkhozniks in proportion to their basic earnings, and 60 per cent is added to the communal funds.

Comrade Shevchenko noted the increasing importance of accurate planning. Vagueness, chance and disregard for plans should be eliminated from kolkhoz practice. Farm artels can draw up realistic plans for farm development, accurately compute their costs and guarantee kolkhoznik wages only if they are informed at the beginning of the fiscal year as to the plans for the sale of produce to the state, the prices at which they will be sold and how much taxes will amount to.

A. L. Rosenzweig, chairman of the Komsomolets kolkhoz, Makarovsky raion, Kiev oblast, reported that the average yearly earnings of the kolkhozniks were low at this artel and that, in the attempt to find a way to improve the economic situation of the communal sector, it was decided to discontinue income distribution on the basis of the trudoden and to convert to guaranteed wages at fixed cash rates for output norms or units of product. They

calculated beforehand that state purchase prices for farm produce not only cover production expenses, but also contain a large reserve for the expansion of reproduction of the kolkhoz economy. They make it possible to guarantee that wages will be paid regularly.

When calculating the economic advantages to be gained from a conversion to the new form of wage payment, management and the leading kolkhozniks started from three principles: to ensure the payment to kolkhozniks of a wage not under 200 rubles per month with the fulfillment of 24 norms; to see to it that the unit cost of kolkhoz produce did not exceed 50 per cent of the state purchase price, and that wages should not comprise more than 60-70 per cent of the costs of production.

The norms in effect at the kolkhoz were taken as a basis, in order to improve them later on by means of time-studies. Norms are now ratified by the kolkhoz management together with rates. Rates are set, in accordance with a seven-category scale, for the fulfillment of daily norms, the rate going up 25 per cent with each category. All forms of supplementary pay have been abolished.

The kolkhoz's production teams have been put on a cost accounting basis. A limit is set for the costs, wages and other expenses of each team, and the costs involved in each form of production are planned. The earnings of the chairman depend on the achieved production volume, but may not exceed 1,500 rubles per month.

Each 100 rubles earned by the kolkhoznik gives him the right to purchase 15 kgs. of bread and 20 kgs. of fodder from the kolkhoz at cost. The kolkhozniks agree with management that the kolkhoz members should be paid in produce only to the extent of their requirements. Otherwise a peculiar situation arises in which kolkhoz community surpluses are pumped into the barns of the kolkhozniks, who sell them on the market and are drawn away from participation in the communal farming sector.

The introduction of the new wage system not only gave the kolkhozniks an incentive to work harder, but also brought about an improvement in the care and economic use of socialist property. In 1956-1957, the Komsomolets was a backward kolkhoz. During the 8 months of 1958 subsequent to the introduction of guaranteed monetary wages, income from the livestock sector rose to 6.8 times more than in 1956, from horticulture — 4.7 times, from vegetable growing — 13 times, from potatoes — 6.7 times and from flax — 6.9 times. The wage fund grew from 220 thousand to 610 thousand rubles.

Comrade Rosenzweig, as also other conference participants, believes that the guaranteed monetary wage can and should be introduced on economically weak kolkhozes, without waiting until transitional funds have been accumulated.

A. O. Kaulin, chairman of the Mlauts kolkhoz, Autsky Raion, Latvian SSR, noted the great importance of correct zonal farm produce prices for the long-run development and correct specialization of kolkhoz production. For example, in the Latvian SSR the price of 1 kg. of good quality veal has been set at 12 rubles, and for 1 kg. of poultry meat at 8.5 rubles. The cost price of veal is 4 rubles at the kolkhozes of the raion, and 7 rubles for poultry meat. It is the view of Comrade Kaulin that the set prices do not stimulate the development of poultry farming on the kolkhozes of the raion. Comrade Kaulin, as also other conference participants, noted the unsatisfactory materials and technical service to kolkhozes by the RTS's (Tractor Repair Stations), which give rise to anxiety for the timely and good quality maintenance of tractors and machinery.

E. K. Mostovoi, chairman of the Bolshevik kolkhoz, Gorodok raion, Khmelnitsaya oblast, acquainted the conference body with the forms of labor remuneration in effect on this artel. A tariff scale has been set up here under which full fillment of norms in performance of the simplest jobs under category I is rated at 12.2 rubles; the most complex jobs, under category VI, requiring a specific skill, are paid at the rate of 24.2 rubles. Ordinary field work jobs are rated on a four-category scale. The conversion to guaranteed monetary wages without the trudoden, Comrade Mostovoi reported, has strengthened labor discipline even more, further developed the initiative of the kolkhozniks, considerably increased labor productivity and brought about a fuller utilization of available reserves.

The long-range plan of the kolkhoz, which, in the opinion of its chairman, can not only be fulfilled, but overfulfilled as well, provides for allocations of up to 30 per cent to the indivisible fund; in this connection, and also thanks to the income rise, yearly allocations will increase from 1 million to 3 million rubles and the indivisible fund will rise to 17 million rubles by 1965. It will thus be possible to increase the size of capital investments for the development of the economy of the kolkhoz, to expand construction for production, cultural and domestic service purposes, and improve the prosperity of the kolkhozniks still more.

M. P. Skalin, chairman of the Lenin's Way kolkhoz, Minkhevsky raion, Moscow oblast, told the members of the conference that labor discipline improved considerably, and the productivity of kolkhoznik labor rose during the very first months after the introduction of the guaranteed monetary wage; also that the sowing, crop-tending and harvesting were done at the right time, well and in less time, and that the economic activity of the kolkhoz improved during this time. The kolkhoz earned an income of 3,873 thousand rubles during the first half-year alone, only 23 per cent of in-coming cash having been disbursed for wages under the new system. Increasing its allocations to the indivisible fund, the Lenin's Way kolkhoz set aside 2.5 million rubles for capital construction, which funds are earmarked for the construction of a well-equipped cow shed with 140 stalls, a pigsty with accommodations for 1,000 animals, a machine shop for the maintenance and repair of the machinery and tractor stock, a garage, a bathhouse and other production and cultural-domestic buildings.

Forty young men and women, who earlier had taken jobs elsewhere, returned to the kolkhoz after guaranteed monetary wages had been instituted, and the kolkhozniks came to take less interest in their subsidiary farming — 50 kolkhoznik families sold their cows to the kolkhoz.

Comrade Skalin, like other speakers, emphasized the importance of regular payments of guaranteed wages to kolkhozniks, which is not always taken into account by the Gosbank (State Bank). Irregularity in the payment of wages diminishes the effectiveness of the new wage system, and undermines the faith of the kolkhozniks in this progressive measure.

The members of the conference gave a great deal of attention to problems of accounting and planning procedures. Considerable attention was aroused by the detailed report of the chief accountant of the Moskva kolkhoz, Oktyabrsy raion, Tadzhik SSR, K. Seitenov, on the practical application of the new wage system and of cost accounting methods and also on the improvement of the forms of kolkhoz accounting and planning, and by the report submitted by P. I. Florikov, chairman of the Karl Marx kolkhoz, Stalin raion, Kirghiz SSR, on planning and cost accounting practices, ways to cut down on the consumption of labor, materials and funds in farm production.

Most of the speakers approved the proposal of the VNIESKh on the use of sovkhoz norms as a basis for the

ndardization of kolkhoz labor. At the same time, seri-
s complaints were lodged against the USSR Ministry of
riculture, the All-Union Scientific Research Institute for
ricultural Economics and other scientific research es-
olishments, which to date have not worked out scientifical-
sound output norms for kolkhozes in the various zones.
The conference members acknowledged the timeliness of
s convention and the fruitfulness of the extensive ex-
ange of views and experiences in the application of the
ogressive forms of labor remuneration that should be in-
duced on kolkhozes.

New Ukrainian Economics Journal

The first issue of the new bi-monthly Ekonomika Radyan-
y Ukraini has just come out. It is the organ of the Gos-
n of the Ukrainian SSR and of the Economics Institute of
USSR Academy of Sciences. It will be the job of the
rnal to elucidate problems of the theory and practice of
mmunist construction, political economy, national eco-
nic planning, the geographic distribution of production
oughout the republic, the economic structure of transpor-
on, agriculture and industry, problems of accounting and
tistics, the economies of the peoples democracies, the
ory of economic thought, and also the economic struc-
e of capitalist countries.
t is intended in the journal to give broad treatment to
blems of the further improvement of industrial and con-
struction management organization, the development of economic administrative raions, the practices of sovnarkhoz (national economic councils) work, and the experiences of advanced industrial enterprises, kolkhozes, RTS's and sovkhozes.

One of the most important purposes of the journal is to struggle resolutely against the bourgeois and reformist ideologies and against modern revisionism.

The journal Ekonomika Radyanskoy Ukraini is intended for a broad readership — industrial, agricultural, transport and trade specialists, the employees of sovnarkhozes, planning, financial and credit agencies, the staffs of scientific research institutions, VUZ (institution of higher learning, college) teachers and students, and party, soviet and trade union activists.

The first issue of the journal contains the following articles: I. Senin, Chairman of Gosplan UkSSR, "The Outlook for the Development of the National Economy of the UkSSR and the Tasks of Economic Science"; P. Pershin, academician of the Ukrainian Academy of Sciences, "The Development of Cooperative-Kolkhoz Property on the Road of Communist Construction"; M. Seredenko, "Basic Ways of Further Developing the Ferrous Metallurgy of the UkSSR"; A. Rukavishnikov and V. Kalechitza, "Problems of the Development of the Chemical Industry of the Ukraine"; V. Bondarenko and M. Markin, "The 1959 All-Union Census" and others. The journal contains a special section "Regional Economic Structure," which presents material on the work of sovnarkhozes and the economic development of economic-administrative raions.

ASLAVSKAYA (Continued From Page 69)

ther measures to help them overcome their backward-
s such as, for example, the sound selection of farming
vities to be pursued, etc.
he rise of weak kolkhozes to sound economic positions
the introduction of the guaranteed monetary wage system in all artels throughout the country will act as powerful factors for the further prosperity of agriculture based on the fulfillment of the plan of the 21st Congress of our Party. This will constitute an important step towards the further approximation of kolkhoz ownership to public ownership.

A. Stupov:

The Prague Conference of Economists from the Socialist Countries

In December, 1958, at Prague (Czechoslovakia), a conference of economists from the socialist countries was held. The conference was attended by representatives from the economics institutes of academies of science and also from other scientific institutions. Altogether 42 economists from all countries of the socialist camp took part in the work of the conference.

The conference was opened by V. Keigl, the director of the Institute of Economics of the Czechoslovak Academy of Sciences. In his opening remarks he described the state of countries and the tasks confronting the scholars of these countries in the area of scientific research work on economic problems. For the specific discussion and elaboration proposals on economic subjects, three sections were set up: on the political economy of socialism, on problems of the world socialist economic system, and on the political economy of capitalism. Intramural conferences were also held by specialists in problems of the specific economics of industry and agriculture, economic statistics and the geographic distribution of productive forces.

After the examination and discussion of scientific research plans submitted by all the institutes, the most important subjects were singled out on which it is intended to conduct joint research, to set up scientific collaboration, the exchange of programs and material, to hold regional or general (international) conferences, or to send scholars on missions of long duration, etc.

The conference acknowledged the necessity for publishing joint works during 1959-60 on the following subjects: "Socialist Industrialization and its Peculiarities in the Various Countries of the World System of Socialism," "The Cooperativization of Agricultural Production and its Peculiarities in Individual Countries of the World System of Socialism," "Problems of National Economic Planning in the Socialist Countries," "Aspects of the Reorganization and Rational Direction of the National Economies of the Countries of the Socialist Camp."

It was decided to strengthen scientific ties for the working out of the following problems of socialist political economy: national economic reproduction and balance; the law of value and its application in the economic practices of the socialist countries; increasing labor productivity in the national economies of the socialist countries; the effectiveness of capital investment and of the introduction of new techniques, and others.

Individual problems of the world socialist system will be worked out jointly. For example, the Institutes of Economics of the Academy of Sciences of the USSR and of the Academy of Sciences of Czechoslovakia will work on the problem of "The Theoretical Bases and Prospects of International Division of Labor among the Countries of the World Socialist System." Economists of other countries are now being drawn into research on this problem. Coordinated research is also planned on modern problems of capitalism, especially on the following subjects: "Capitalistic Reproduction, Economic Crises and State-Monopolistic Capitalism," "The Condition of the Working Classes under Modern Capitalism," "The Collapse of the Colonial System and the Development of Economically Backward Countries" — and on several others. While working on problems of political economy (of capitalism as well as of socialism), the economists of the socialist countries will start their research from the positions of Marxist-Leninist science and will criticize present-day bourgeois and revisionist "theories" from the same fundamental positions.

The participants in the conference were unanimous in their desire to discuss conjointly individual problems of outstanding importance. Thus, for example, at the end of 1959 the Institute of Economics of the Polish Academy of Sciences is organizing an international scientific conference on questions of national economic balances and balance-sheet planning methods. In 1960 one scientific conference will be held in the Chinese People's Republic on questions of the political economy of socialism relating to the problems of "The Law of Value and its Application in Economic Practice," and another in Czechoslovakia on the problem of "Price Formation on the Socialist World Market." Learned conferences are also planned to be held in the USSR and in other socialist countries.

In addition to such conferences and the publication of joint works, the systematic publication of translations of scientific works on economics, prepared in socialist countries, is also planned. It has been acknowledged useful to consider and decide whether or not to put out a special information bulletin which would regularly present communications on the work in progress at institutes of economics in the countries of the socialist camp, and on the various forms of creative scientific collaboration.

A two-day long theoretical seminar on the theme "The Economic Collaboration of the Socialist Countries" was organized for the participants in the conference. The seminar was also attended by scholars of Prague, and by newspaper and magazine reporters. Lectures and informative reports were also read by economist scholars of Czechoslovakia, the Democratic Republic of Vietnam, the GDR, Bulgaria, Albania, Hungary, Poland, China, and the Soviet Union. In addition, the conference members visited a few industrial and agricultural enterprises at the invitation of the Czechoslovak economists.

The international conference of economists of socialist countries at Prague has promoted the further strengthening and expansion of scientific collaboration among the economics institutes of academies of sciences and of other scientific economic establishments in the countries of the world socialist system. This will doubtlessly benefit the realization of the plans of scientific work, both individual and collective, of the learned economists of the socialist countries.

Yu. K.:

A Delegation of Soviet Economists in France

Professional ties have been becoming more extensive in recent times between scholars in the Soviet Union and

reign countries. An example of such contact was the ar-val in May of last year of French economists in the Soviet ion and the return visit of a group of USSR economists to ance. Our guests arrived in the USSR headed by General anning Commissioner E. Irchem and by the director of scientific research center of the French Ministry of onomics and Finance C. Gruson. They studied the work Gosplan USSR, visited the Ministry of Finance of the SR and Gosbank USSR, and spent time at the Economics, ilosophy and International Relations Departments of the titute of Economics of the Academy of Sciences of the SR, at the Institute of World Economics and International lations of the AS USSR, at the Institute of Economic Sci-ific Research of Gosplan USSR, at sovnarkhozes, VUZes l enterprises in Moscow, Kiev, Leningrad and Tbilisi, l at kolkhozes.

A delegation of Soviet Economists left on a return visit France last December under the direction of Academi-n V. S. Nemchinov. The delegation consisted of Doctor Economic Sciences L. M. Gatovsky (Institute of Eco-nics of the AS USSR), A. N. Yefimov (Institute of Scien-c Economic Research of Gosplan USSR), V. V. Lyubi-va (Institute of World Economics and International Rela-ns of the AS USSR), M. M. Sokolov (Economics Faculty Moscow State University) and other Soviet economists. e Soviet delegation was very warmly welcomed on its ival in France. The Soviet economists became acquain-with the activities of the General Planning Commission, he Ministry of Economics and Finance, especially of its entific Research Center, of the Banque de France, the sse des Depots et Consignations, the Price Control Ad-inistration, the Productivity Committee, etc. The mem-s of the delegation visited the Institute of Applied Econ-cs, the National Statistical Institute, the Demographic itute, the Economic Institute and the Faculty of Law of University of Paris. In addition, they dropped in on the ault automotive works, the "Sollac" metallurgical plant rraine), acquainted themselves with the irrigational work ng done in southern France, with the operations of the of Marseilles, and visited agricultural farms.

he High Commissioner of National Economics and For-n Trade, M. Flechet, arranged a reception in honor of Soviet delegation. A reception was also held at the Uni-sity of Paris.

everal useful encounters took place between Soviet French scholars, for example at the Institute of lied Economics (Francois Perroux, director), the Uni-sity of Paris, etc. An interesting exchange of views place, during which the French scholars displayed live-nterest in problems of the development of the Soviet nomy. Thus, at the Institute for the Study of Economic elopment at the Sorbonne an extended conference was on the seven-year plan for the development of the national nomy of the USSR during 1959-1965, in the course of which Soviet economists V. S. Nemchinov and L. M. Gatovsky read rts and replied to many questions.

he Soviet economists acquainted themselves with rich variegated material on the state and development of the nch economic structure, on problems of economic policy state regulation of the economy, the management of na-lized enterprises, the organization of the work of sci-ic and learned institutions and of institutions of higher ning. A great deal of attention was given to methods of omic computation and the application of modern com-ng equipment. Special interest was aroused by the work e area of national economic balance sheets being done he Scientific Financial-Economic Research Center ed by M. Gruson.

The visit of the Soviet economists to France was indubitably fruitful, and contributed to the development of scientific contacts, to a useful exchange of views and to a more profound study of the economies of both countries.

A. M.:

A Meeting of Soviet and Chinese Economists in Harbin

An economic conference was held in Harbin (CPR) in the fall of last year by Chinese scholars and staff members of the planning agencies for the north-eastern area of the Chinese People's Republic. Discussions were held on the formulation, direction and content of hypotheses for the development of the national economy in the provinces of Heilungkian and Kirin and in the autonomous district of Hulunbuir (Inner Mongolia). All these regions are located in the Amur basin and the plan for their development is being drawn up under a Sino-Soviet agreement on joint scientific-research and surveying-prospecting work. Hence the Harbin conference was attended by Soviet economic scientists in a consultative capacity.

The conference took place, as our Chinese comrades put it, "under the aegis of the great and striving leap" now observable in every area of the economy and culture of the CPR. Comrade Cheng Kiang-Fei, deputy director of the Heilungkian (Amur) combined expedition of the Academy of Sciences of the CPR, pointed up at the conference the necessity to provide for such a rate of growth in the basic branches of the national economy of the north-eastern regions as will permit them to catch up in several areas, first with England, and later with America. This is no easy task, but they are not afraid of difficulties in People's China. The province of Heilungkian produced no metals only a short while ago. The goal was set to produce 600 thousand tons of steel in 1958 and 1,800 thousand tons in 1959. By the end of 1958, 500 small blast furnaces of more than 8 cubic meters in size, and up to 1,000 three-to-four cubic meter furnaces were put into service in this province. At the same time, blast furnaces of 250-500 cubic meters are being built at the locations of extensive iron ore deposits.

It is also planned to increase the gross wheat harvest in the province of Heilungkian in 1959 to 60-70 per cent greater than in 1958.

The Heilungkian provincial economic program for the next few years follows lines determined by the following goals: full local supply of iron and steel requirements; to produce all basic machines and machine-tools in the province; to produce precision tools and develop high-quality machine building in the cities; to concentrate all farm-machinery manufacture in the raions of the province.

The conference program was worked out by Chinese scholars conjointly with the representatives of the Soviet economists A. I. Sobenin and V. A. Shelest. It provided joint plenary sessions for hearing and discussing lectures by Chinese scholars and members of the staffs of planning agencies on the state and prospects for the development of the economy of the Amur basin provinces of the CPR, and also lectures by Soviet scholars on basic problems of method in the elaboration of the hypotheses. In addition, a cycle of sectional conferences was planned for the thorough discussion of methods and practices in the formulation of these hypotheses. Lectures were read in plenary session by the representatives of planning committees Comrades

Wang, Wu, Sung-Li, and the summarizing lecture on "The Scientific Hypothesis of the Development of the Productive Forces of the North-Eastern Provinces of the CPR" was read by Prof. Wang Chou-Li.

Predominantly methodological lectures were read in plenary session by the Soviet economists: "Principles Governing Long-Range Power Supply Construction in a Region" (V. A. Shelest), "The Quantitative Evaluation of Agricultural Resources in the Soviet Amur Basin" (A. A. Ivanchenko), "Certain Problems of the Geographical Distribution of Production and of the All-Round Development of Regions" (N. M. Oznobin), "The Determination of the Economic Effectiveness of Capital Investments" (N. V. Vinogradov), "Fundamental Problems of Method in the Formulation of a Long-Range Manpower and Population Balance of an Economic Region" (A. B. Margolin).

The director of the Amur expedition, S. V. Klopov, delivered a dissertation on experiences in the organization of economic research in the Soviet part of the Amur basin.

Intensive work was carried out by three sections organized at the conference on power supply, industrial economics and agriculture. Basic emphasis was here laid on specific calculations, and on the transmission of economic research experience; general points were illustrated by examples from Soviet and Chinese scientific and planning practices. Thus, the power supply section, led by the engineer Chiang Beng (V. A. Shelest advising), did computations on the technico-economic evaluation of the power resources of the Amur basin, computations on the effectiveness of unifying electric power systems and laid the foundations for an electric power system in this basin (the configuration of the scheme, technical-economical specifications, etc.). This section discussed five subjects.

The industrial economics section, headed by Prof. Wang Chou-Li, heard seven advisory talks by the representative of the Soviet group A. B. Margolin: "The Analysis of the Current Condition of the Economy of the Economic Region," "Methods for the Analysis of Inter-Regional Economic Relations," "Practical Methods for Drawing Up a Balance of the Transportation of the Economic Region," "The Evaluation of the Results of the Long-Range Development of a Region (General Survey of Effective Development in the Region)," and others. Chinese economists, geographers, employees of planning agencies participated in the work this section.

The agricultural section was the most numerous and d cussed a greater variety of problems than the other sec- tions. It was headed by Prof. Wu Yuan-Kung. The Sovie advisor of this section, A. A. Ivanchenko, gave 11 adviso talks on pertinent subjects: "Methods for Calculating Agricultural Produce Requirements," "Calculating the Feed Requirements of Livestock and the Organization of Feed Base," "Livestock Development Planning," etc.

Chinese economists showed lively interest in the work the section and in the plenary sessions of the conference They were attended by VUZ and technical VUZ teachers from Harbin, and by representatives of party organizatio and peoples committees. Most participants in the confer ence took an especially active part in the discussion of s methodological subjects as "The Determination of the Ef fectiveness of Capital Investments," "Selecting the Regio for the Construction of New Enterprises," "Methods of Drawing Up Basic National Economic Balances," "The A Around Development of Economic Regions," "Principles the Quantitative and Qualitative Evaluation of Natural Re sources." Unfortunately, the last named subject could on be elucidated in part (due to the lack in the Soviet group forestry and geology economy specialists). The Chinese scholars voiced their desire to organize further consulta tions on problems not yet treated.

When they were not attending the plenary and sectionall sessions, the Soviet consultants visited enterprises in Ha bin, viewed the construction in progress on small blast- furnaces, stopped by on the construction site of an apart- ment building, on which no quantities at all of four scarc building materials (wood, iron, brick, cement) are used, visited the Harbin Polytechnical Institute, where in sub- sidiary enterprises the students of this technical VUZ pu out 35 million yuans worth of various types of industrial products per year, and the Harbin Secondary School No. 1 The Soviet specialists also acquainted themselves with th work of the Golden Star peoples commune, located near Harbin.

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